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OIL WORLD
and Petroleum Industry

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CENTS

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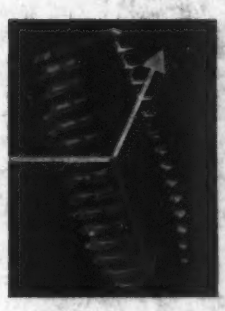

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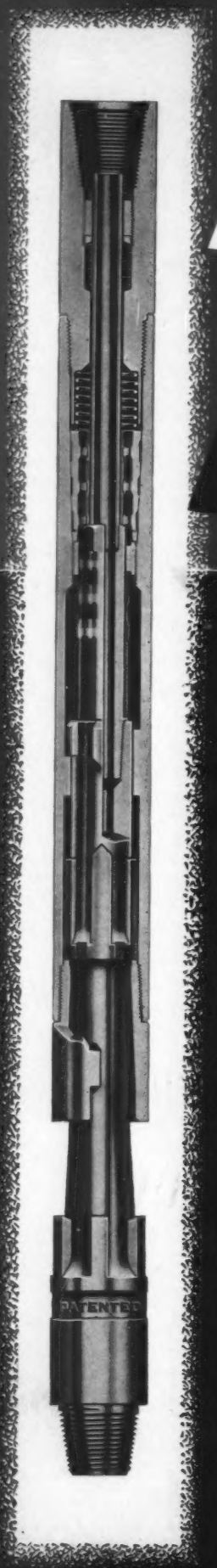

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CALIFORNIA
OIL WORLD
and Petroleum Industry

THE AUTHORITY ON THE CALIFORNIA OIL INDUSTRY

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The California Oil World's Series of Articles on the Beginning and Development of the Oil Companies Making Up the California Petroleum Industry Will Be Continued in an Early Issue.

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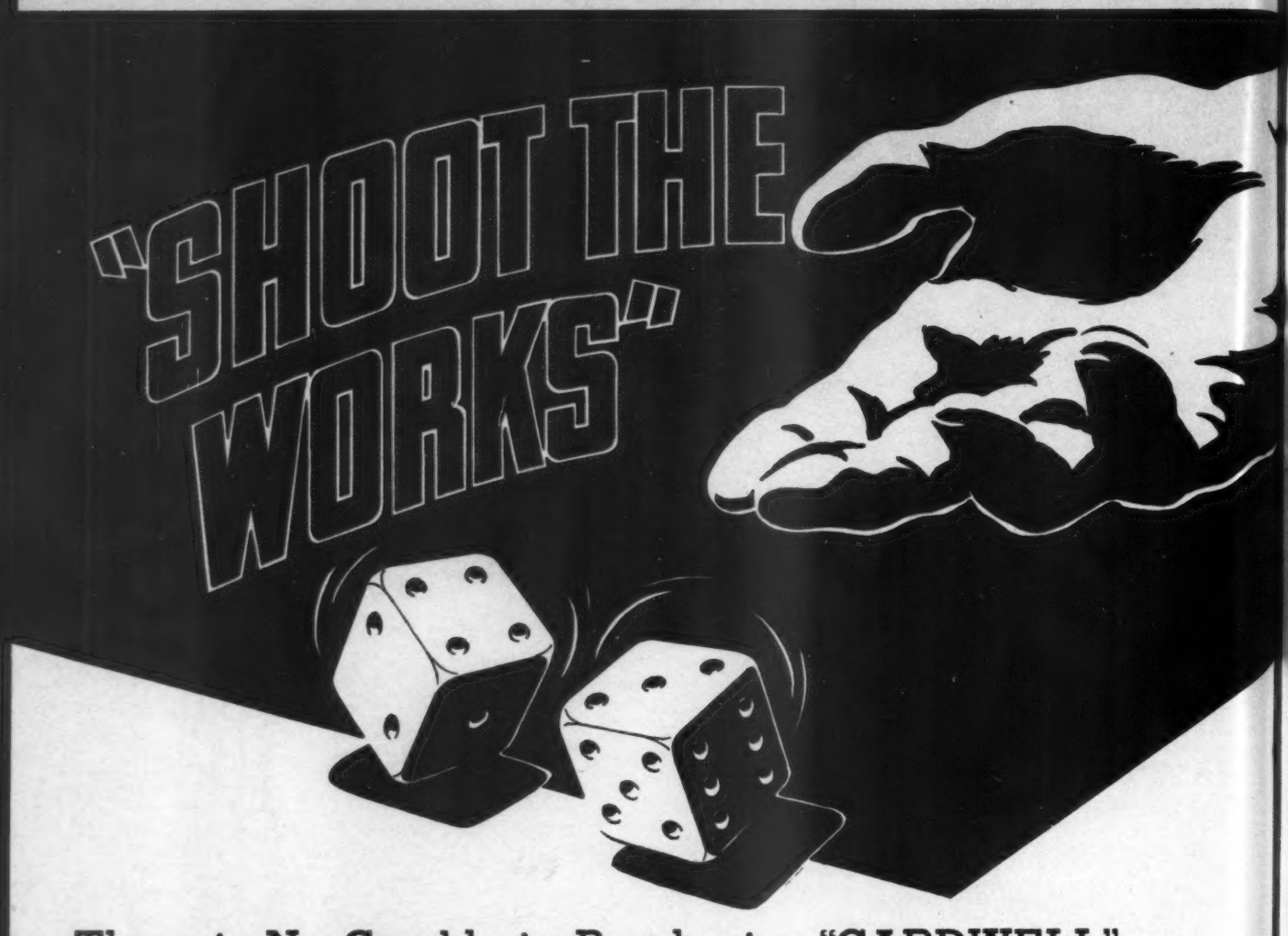

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CALIFORNIA
OIL WORLD
and Petroleum Industry

Another Important "Scoop"

California Oil World, the first oil trade publication in California, the first trade publication ever to present readable, human, and personalized histories of the companies making up the industry which it represents, plans a new series of articles—a new series which will add another to the long list of "firsts" scored by the publication.

The new series will tell of the developments of methods, materials, services, and equipment used in rotary drilling—from the first rotary well in California through the successive years to the present day—to the Continental Oil Company's 15,000-foot well near Wasco, Kern County.

This series will not replace the oil company series now being published by the California Oil World, but will be an added feature—a history of the changes in design, the improvements, the new equipment and services, as they appeared on actual wells; that show how, through patient hours of research, through the expenditure of many millions of dollars, the manufacturers of oil well equipment and the companies offering many types of oil well drilling service, have kept the oil industry constantly supplied with equipment and methods capable of drilling to greater depths than the oil industry, at any given time, cared to drill.

Oil companies—the pioneering companies who set new depth records from time to time, and who furnished the funds for drilling to greater and greater depths; the pioneering companies who offered their wells and their properties to supplymen and supply companies who had meritorious but untested new equipment, who offered these men the opportunity to put their equipment into actual service under actual drilling conditions—these oil companies will also be given credit as the type of American industry which, by adopting new methods, new materials, and new ideas, makes progress possible.

This series of articles will be the first of its kind ever attempted. The California Oil World will be the first publication to give the oil industry's brother industries—the oil well equipment and services industries—the recognition and commendation they deserve as being the creators of the sinews by which the oil industry is given strength to continue its never-ending, always deepening, search for oil.

Since the beginning of rotary drilling, there has never been a piece of equipment that set a limit to the depth to which a well could be drilled. From the earliest rotary drilling, with its crude and untested equipment, machinery and methods, the manufacturer has always furnished equipment capable of drilling to a depth greater than the oil company drilled the well.

No oil company has ever equipped a well with custom made or "tailor-made" machinery designed for the express purpose of drilling to a depth greater than had ever before been reached. Deep wells, in most instances, "just happen." When they start, they are just oil wells, but as drilling progresses, the drilling company for one reason or another—because it thinks that in just a few more feet the drill will reach the oil sand, or because it desires and needs additional geological information about the area being drilled, or because it wants to make a final and conclusive test of the area—continues going down into the earth until, for some equally good reason, it has come to the conclusion that further drilling is not warranted.

Deep wells have sometimes been halted by mechanical accidents. Deep wells have sometimes been stopped by fishing jobs, by extraordinarly high water pressures in subsurface formation, by other causes. But, and at the same time, much shallower and routine wells in proven fields have also been halted, and their abandonment forced, by the same type of accidents.

During all the time that rotary drilling has been developing into the art that it now is, the manufacturer of the equipment used in the drilling has been one step ahead of the oil company. He has been furnishinng the oil company with tools that have been so efficient that no drilling project has used their full capabilities. Pumping equipment will be discussed at length.

Magazines, newspapers, books, and other published material, have been full of the wonders and marvels of research. The automobile industry, the electrical industry, the steel industry, and the sciences—medicine, chemistry, biology, physics—to mention but a very few of the many, many hundreds of industries and professions which devote time, money and effort to constant research in the never-ending striving to make their products and their services more and more nearly approach perfection, have been told and retold by writers of all kinds and capabilities. No one, insofar as the California Oil World has been able to learn, has ever pointed out that while other industries were improving their products, the oil well equipment industry was also making just as many and just as rapid forward strides.

The series will start in an early issue of the California Oil World. It will be profusely illustrated with photographs of equipment—the equipment of twenty years ago and the equipment of today, and the equipment of the intervening years. It will tell of the development and application of new services and methods as they were originated by manufacturers and inventors and put to use by the oil industry in its drilling operations. It will tell of the supply companies that made the equipment, and of the oil companies that used it.

The series will be the first history of the development of the oil well equipment manufacturing business, and will, incidentally, be a complete history of the progressive stages of development of men, machinery, and methods, that have made it possible for the oil industry to drill from the 69-foot depth of the Drake well to the 15,000-foot depth of the latest record-holder, the Continental Oil Company's Kernco A-2, in Kern County.

Upon completion of the series covering the drilling practices of the oil industry, a similar series will consider the progress made by the manufacturers of refining and natural gasoline equipment—and will trace the development of new methods and new materials as they appeared in these two phases of the oil industry's operations.

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New Deep Zone Development In Torrance

By James A. Bermingham, Jr.,
Petroleum Engineer, The Texas Company

This paper on present activity in Torrance field is not intended to be comprehensive but merely generally informative.

The Torrance field is located in the Los Angeles Basin 20 miles south and slightly west of the City of Los Angeles. It occupies an area approximately six miles long and slightly over one mile in width. A slight but broad elevation trending Northwest-Southeast reflects the anticline on the surface.

The Torrance field was discovered in 1923. The development reached its peak in 1925 at which time 904 wells had been drilled. There are 4500 proven acres in the field. The production from the Main zone has been between 20,000 to 25,000 barrels per acre. A typical generalized geological column of the sediments underlying the Lomita area of the Torrance is shown here. As indicated on the log, the Main zone in the Lomita area is found 200 feet below the Pliocene-Miocene contact. The Main zone consists of 300 to 400 feet of well saturated, fine grained sands (30%) interbedded with streaks of hard Miocene shales. The initial completions ranged from 2000 to 300 B/D of 18 to 25 gravity oil.

Recent developments in the Torrance field have resulted in a deepening campaign in this field which has been relatively inactive the past 15 years. The objective horizon in the present deepening campaign is to a newly discovered zone which was encountered strategraphically 1600 feet below the top of the Main zone.

Discovery of Lower Zone

The new zone is referred to as the Del Amo zone. It was discovered and first produced in 1936 by the Chanslor-Canfield Midway Oil Company "Del Amo No. 23" located in the central portion of the Torrance field. This well commenced to deepen in July 1936 and was thoroughly cored. Thirteen hundred feet of hard Miocene sediments were penetrated before encountering at 4817 a glaucophane-talc schist complex of Pre-Jurassic age.

Directly overlying the schist 50′ of schist conglomerate was cored. The conglomerate, regarded to be of Middle Miocene age, is the same horizon from which large production is obtained in the El Segundo field 10 miles to the north. A string of 5″ casing was set in nodular shale directly above the conglomerate, which showed some free oil in the upper portion. On a production test the well made considerable water with a trace of oil. A "water-witch" run indicated that the upper most portion might be productive and indicated that a high head water was in close relationship with the possible productive streaks.

Attempts to exclude this water were futile so that in November 1936 the well was plugged back to the newly discovered oil sand interval.

The well was gun perforated from 4395 and completed flowing 120 B/D of 27 gravity clean oil on November 1936.

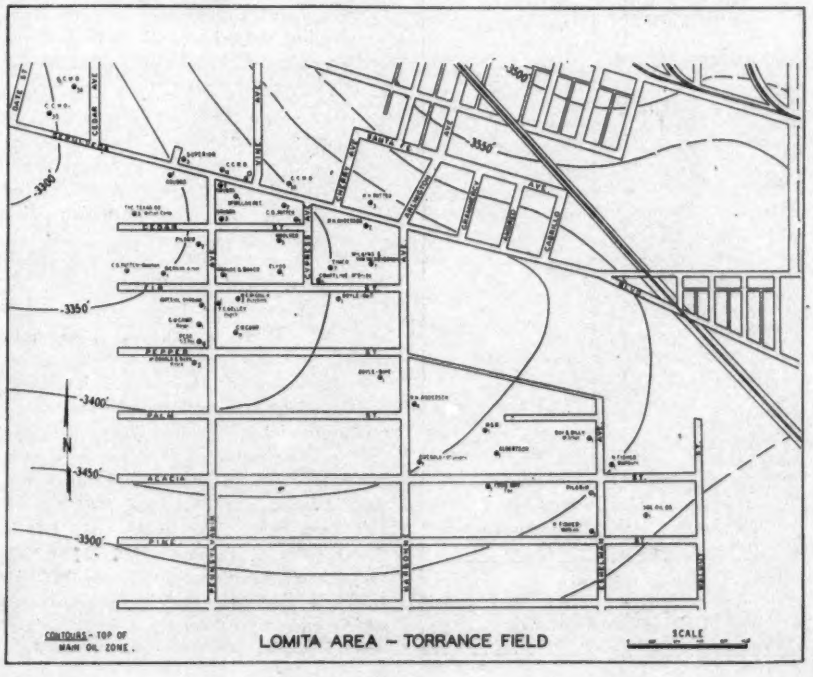
Following the success of "Del Amo No. 23", the C.C.M.O. Co. selected their "Redondo No. 2" to further prospect for the new productive sand. This test was located in the extreme western portion of the field and on the highest part of the Torrance structure. The prospect hole was cored thoroughly and definitely showed that the Del Amo zone was not present, the equivalent sand having graded up dip into shales.

Activity Focuses in Lomita

In 1937, following the discovery of the new zone, several wells were deepened in the Lomita townlot portion of the Torrance field.

The Lomita area is located in the southeast quarter of the central portion of the Torrance field.

Below is a map of the Lomita townlot portion of the field. The wells shown represent only those wells which have been completed or are deepening to the Del Amo zone. The contours are of the upper Main oil zone. In 1937 the early completions in the Del Amo zone in this area were, in order (see map) C.C.M.O. Torrance 34, Four Way Oil Oil Co. Torrance No. 1, E. H. Grubbs Torrance 3. Due to the completion of these wells flowing 250 to 200 B/D of 27 gravity oil, immediate attention was directed to the area. The successful completion of the C.C.M.O. Torrance No. 34 and E. H. Grubbs Torrance No. 3 in the northwest portion of Lomita area (see Figure 2) and that of the Four Way Oil Co. well ¼ mile to the southeast, proved the Del Amo zone would be productive in the intervening area. A rapid development "boom" ensued in January 1938. Wells producing from the Main zone (3500-3750) and yielding only 15 to 25 B/D were taken off production and rotary equipment was moved in to



redrill and deepen to the newly discovered underlying zone. New derricks were erected over old holes formerly abandoned and quit-claimed several years ago as unprofitable to operate in the Main zone.

Some operators commenced to deepen their wells through the 6⅝" oil strings in the Main zone but the majority started to redrill directly below the shoe of the upper water string set over the producing zone.
The usual problems of re-entering abandoned holes existed and various conditions were found. Some operators were successful in attempting to clean out the abandoned water strings to within a short distance of the hole at 3500′. In other cases, upon re-entering the abandoned holes the water strings were found to have collapsed, requiring the commencement of a redrill as high as 1000′.

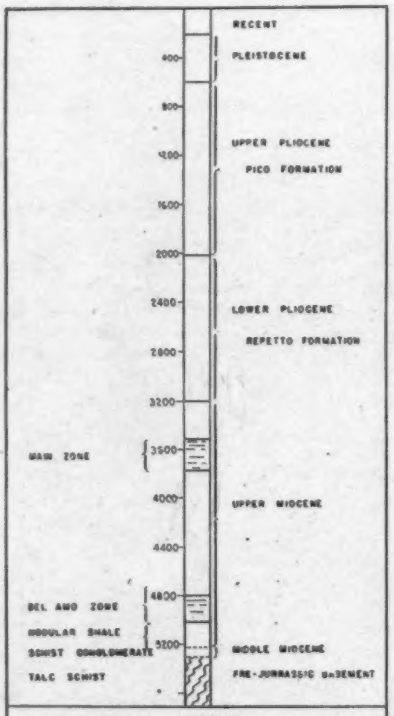
At the present time 11 wells have been completed in the Del Amo zone and 27 redrills are under way. Of these active wells 20% are abandoned wells which have been re-entered.

There are three reasons for this intense activity in the field.

1. The activity is concentrated in the Lomita townlot portion of the Torrance field which is comprised of numerous small leases held by many operators.

2. The wells producing in the Main zone for the past 15 years are now yielding only 15 to 25 B/D and are deepening to the newly discovered underlying zone.

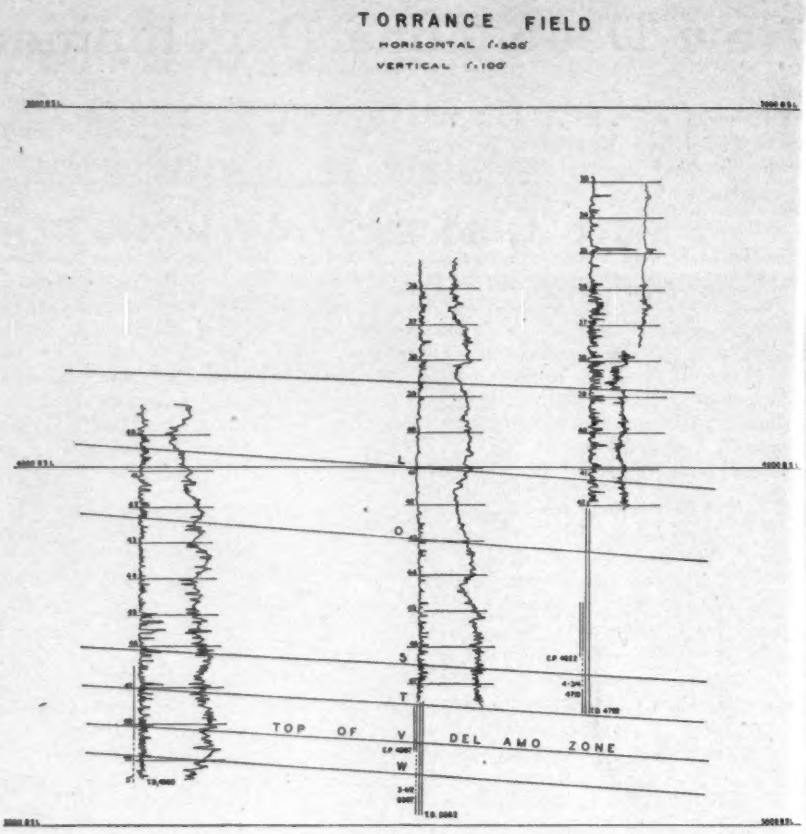
3. Several operators are electing to reenter the old abandoned holes in the townlot area to take advantage of 3500′ of cased holes from which point to redrill and deepen.



TYPICAL GENERALIZED GEOLOGICAL COLUMN — LOMITA PORTION

TORRANCE FIELD

CALIFORNIA



A typical Northwest-Southeast cross-section through the Lomita area of the Torrance field is shown also and illustrates the position of the Del Amo zone to the upper Main zone. The well on the right was completed at 4700′ as a commercial producer. The well in the center was completed in the corresponding interval as a small producer but a month later was deepened 300′ to the Del Amo zone. The well on the left is the C.C.M.O. Torrance No. 34 which was cored continuously from 3800 to 4780 and was completed in the new zone which had been discovered in their Del Amo No. 23.

The Del Amo zone consists of 60% fine, firm, well saturated oil sands interbedded with hard, gray-brown Miocene shales in the upper portion of the zone, while the lower portion is largely a solid sand section.

Cross-sections through the Lomita area indicate that the formations are dipping approximately 12 degrees to the Southeast along the plunge of the structural nose. This is substantiated by dips in various cored sections. The top of the Del Amo zone in the western portion of the Lomita area is encountered from 4780 to 4850 depending upon structural position. Farther to the east and down dip the top of the new zone varies from 4975 to 5050. A safe completion depth for wells in the western portion of the field is 5000′ without danger of coring gray sands. Down structure in the eastern portion of the Lomita area, only the upper portion of the Del Amo zone can be produced as the edgewater table is occupying ½ of the zone which can be produced higher up dip. Wells in this extreme eastern area as shown on map can safely bottom at 5100 without penetrating gray sands which yield a high head water. The salinity of this bottom water ranges from 1400 to 1500 grains per gallon.

There are indications of a few minor portions of the Del Amo zone which look weak and have been blanked off in some wells. However, in this stage of development little is known regarding any definite wet horizon within the Del Amo zone. A high head water, however, appears to continue through the Lomita area directly above the Del Amo zone. Its natural fluid level appears to be approximately 1000'.

This is a transcript of a paper presented at a recent meeting of the Los Angeles Chapter of the American Petroleum Institute held in Long Beach. The illustrations are presented through the courtesy of The Texas Co.

In summation, the following conditions have been observed in the present stage of development of the Del Amo zone in the Lomita area of the Torrance field:

1. That the Del Amo zone was not found on the highest portion of the Torrance structure.

2. That the Del Amo zone becomes progressively more sandy down structure from the C.C.M.O. Del Amo No. 23 to and within the Lomita Area, indicating that the zone possesses characteristics of a flank sand thickening to the east.

3. That no definite evidence of a major fault has been observed at this time, however, slickensides have been noted in various cored sections.

4. That the development, though rapid, has been orderly. Wells have been carefully cored and electrically logged which has minimized the hazards and aided materially in obtaining successful completion of wells in the newly discovered zone.

5. That the position of the edgewater in the Del Amo zone in the S. E. portion of the Lomita area occupies approximately ½ of the zone which can be included in the productive interval of the zone in the N. W. portion of the Lomita area. The completions and expected recoveries in the Southeastern portion of the Lomita area are accordingly lower.

Largest Mechanical Rig For Richfield Oil

Richfield Oil Corp. have installed the largest mechanical Rig in California, at their KCL No. 1, wildcat, at Wheeler Ridge, which is just west of the Standard Oil Co. Camp.

Power is supplied by two 8½-in. bore by 9-in. stroke, six cylinder, 350 HP gas-gasoline engines, which are operating on natural gas, at a power cost averaging approximately $8.40 per twenty four hour day. These engines are so arranged that they can be operated separately or in tandem, making available, 700 HP to the draw works, when needed.

A chain driven transmission is used, which contains three speeds forward and a reverse, and eliminates the use of a reversible clutch and a gear transmission.

A double pump drive is also in use, which permits driving either of the two pumps from the rear engine or both engines.

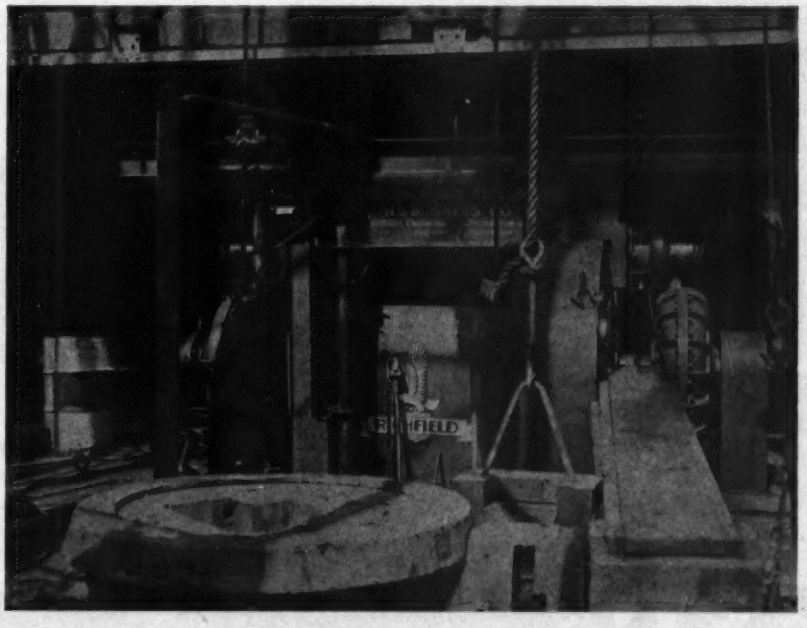
Being constructed in units which are quickly assembled, rigging up and tearing out time is reduced to a minimum.

Owing to its extreme portability and low power cost, and the fact that it will drill 12,000 feet, this type of drilling equipment is particularly attractive for wildcatting and is fast gaining popularity.

The draw works, transmission, engines and pump drive, are manufactured by the Wilson Manufacturing Co., of Wichita Falls, Tex., and sales and distribution on the Pacific Coast, is handled by the H. & B Sales Co., Ltd. of Long Beach, Calif.

F. A. Graser

After a long absence from the pages of The California Oil World, the typographical furies played a one-page engagement in the covers of the March 20 issue. The innocent victim is shown above in a posed picture which speaks well for his amiable disposition. Not content with mis-spelling F. A. Graser's name, the typesetter inadvertantly reversed the contention of this well known consulting petroleum engineer by causing him to say that "the fault does not extend through the north flank of the field". Mr. Graser in discussing the fault in the Long Beach Harbor area actually said that the fault **does** extend through the north flank of the field. Mr. Graser's paper was an A.P.I. presentation.



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Phone 413-51
March 29, 1938

Crum-Brainard Company, Ltd.
217 Magnolia Avenue
Whittier, California

Gentlemen:

We are writing this to inform you of the exceptional performance obtained by us through the use of your Roller Cutter Drilling Bits, as to drilling time, average footage per bit, and especially pertaining to the straight hole drilling features.

We have just finished and put on production the last of four wells which were drilled by us for the Westgate-Greenland Oil Company on their 4½-acre property in the Harbor District of Long Beach and following is a summary of operations on these wells.

Well No. L.B.H.D. 1—Spudded in on 2-12-38 and finished drilling on 3-8-38, depth 3885 ft., thirty-six hours and twenty-four hours respectively having been allowed for the setting of the 18" and 13" casing. Well was turned into tank on 3-13-38.

Well No. L.B.H.D. 2—Was spudded in on 2-10-38 and finished on 3-8-38, depth 3887 ft., same time as on No. 1 being allowed for 18" and 13" casing to set.

Well No. L.B.H.D. 3—Spudded in on 2-8-38 and finished on 3-2-38, depth 3880 ft., same allowance as above for 18" and 13" casing to set.

Well No. L.B.H.D. 4—Spudded in on 2-10-38 and finished on 3-4-38, depth 3880 ft., 60 hours total time having been allowed for 18" and 13" casing to set.

In the drilling of these four wells we used eight 17½" Crum-Brainard bits averaging 734 ft. of hole from each bit, and eleven 12¼" bits averaging 561 ft. of hole per bit; also we used two 7⅞" Crum-Brainard bits to drill out plugs.

In the drilling of these wells it was quite important that we should at all times maintain a straight hole and the following summary of surveys which were made by the Eastman Oil Well Survey Corporation shows that this was accomplished to a point nearing perfection. Summary follows:

Well	Deviation From Vertical	Bottom Depth	Max. Drift Angle	Average Drift Angle of Well
No. 1	3.85 Ft. @	3885	0o-40'	0o-11.4'
No. 2	3.31 Ft. @	3887	0o-35'	0o- 8.4'
No. 3	5.17 Ft. @	3880	0o-35'	0o-10.8'
No. 4	2.53 Ft. @	3880	0o-20'	0o- 8.4'

Trusting that above may be of some value to you and assuring you that your products have been most satisfactory, we are,

Very truly yours,

KERN DRILLING COMPANY.

By E. F. Richards

By T. M. Rowan

WESTGATE-GREENLAND OIL CO.
L-B-H-D.A No. 1

EASTMAN OIL WELL SURVEY CORPORATION
2860 Long Beach Boulevard, Long Beach, California
March 18, 1938

Crum-Brainard Co., Ltd.
217 Magnolia at Whittier Blvd.
Whittier, California.

Gentlemen:

. . . During February and March, 1938, we were called upon to make various Truck Magnetic Surveys of the four wells drilled by the Kern Drilling Company for the Westgate Greenland Oil Company in the Harbor District of Long Beach.

According to our records, wells number A-1, A-2 and A-4 are the straightest wells which the Eastman Company has surveyed in any of the California fields, number A-4 holding the record for straightness. If we had found any one well on a lease to have been drilled as straight as any one of these Westgate Greenland wells, we would have concluded that the hole had been straight, more through good luck than through the employment of good drilling methods, bits and equipment. However, when four such wonderfully straight wells are grouped on one lease and drilled by *one* company with similar equipment, we must conclude that their excellence is based upon skillful methods and the use of proper drilling equipment and bits for producing straight holes.

Very sincerely yours,
EASTMAN OIL WELL SURVEY CORPORATION.
By R. E. Wiley

The distinctive features of this bit are fully patented.

Follow the example of prominent operators in all California oilfields and boost your drilling efficiency by standardizing on the Crum-Brainard Four-Cutter Roller Bearing Rotary Drilling Bit.

CRUM-BRAINARD

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Newhall-Potrero Field Study Report

The Newhall-Potrero oil field lies approximately 6 miles due west of Newhall, in Los Angeles Co., bordered by the Santa Clara River on the north and the Pico Anticline on the south. The field was discovered March 12th, 1937, by the Barnsdall Oil Co., and is situated in a low meadow surrounded by rim rocks.

The geologic structure is essentially an anticline plunging northwesterly with its southeasterly portion terminated by a cross-fault trending nearly due east-west.

The first well, Rancho San Francisco No. 1 was spudded Aug. 10, 1936, and completed Mar. 12, 1937, at a depth of 6472 ft. for an initial production of 137 bbls. per day, 33 gravity oil. The well penetrated rocks of the Pliocene age (Pico and Repetto formations) to a depth of about 6000 ft., and cored Miocene oil sands at 6160 ft. The oil sands are correlated with Miocene sands that outcrop in Pico Canyon in the vicinity of the Pico Oil Field.

Well No. 2 was spudded June 20, 1937 and completed Feb. 7, 1937 for an initial rate of 1660 bbls. per day of 33 gravity oil.

Field geology, supplemented by seismonograph, indicates 1000 acres will be productive, all under lease to Barnsdall from the Newhall Land and Farming Co.

The area described embraces about 55 sq. mi. in the vicinity of Castaic on the Santa Clara River, 40 miles northwest of Los Angeles.

Preliminary work had indicated a possibility of abtaining additional production in the area. However, five months of field work resulted in finding no other suitable oil structures. Several anticlines and synclines north of the Santa Clara River are all open to the northwest and plunge southeast into the broad floor of the river.

Geophysical work along the Santa Clara is of doubtful value. Structure interpreted by this method differs from that on the surface; that is, near Castaic, several surface folds become two large folds at a depth of about 4000 ft. It appears that geophysical work in an area such as this is inaccurate due to the proximity of solid formations.

Structure

Possible Oil Structures: At the beginning of the work the following structures were considered as having oil possibilities:

A previously mapped anticline in sec. 24, 4N, 18W, Ventura Co., at the western end of the area proved to have been interpreted from an overturned monocline in an area of poor exposures.

An anticline plunging easterly to San Martinez Grande Canyon from the NE

The material for this article was obtained through the courtesy of R. A. Broomfield, Jr., of the Barnsdall Oil Co.

¼ of sec. 18, 4N, 17W, Ventura Co., is open to the west where the section becomes monoclinal. In San Martinez Chiquito Canyon, a short distance north of the state highway, a broad anticline, possibly a continuation of the above, plunges gently to the east under a high hill of Saugus gravels. It is very shallow with indefinite closure to the west.

South of the river there are no possible oil structures other than the anticlinal nose of the Potrero.

Folding: South of the river the structure is essentially a monocline dipping northerly from the axis of the Pico anticline, except for the faulted anticlinal nose defining the Newhall-Potrero structure. The monocline strikes N 70 degrees E. in the area between the Beacon and San Martinez Grande Canyon. The beds are wrinkled by several sharply folded anticlines and synclines which plunge northeasterly under the alluvial floor of the river valley, and have very little reflection on the opposite side.
West of this folded area, the structure again becomes monoclinal, the beds dipping 30-60 degrees southeasterly toward the river from the ridge north of San Martinez Grande Canyon.

Two conclusions may be drawn from the geophysical work: 1. That if the geophysical data gives a true representation of the structure, it would then be impossible from a surface structure with closure, to determine the structure at the depth of a producing oil sand.

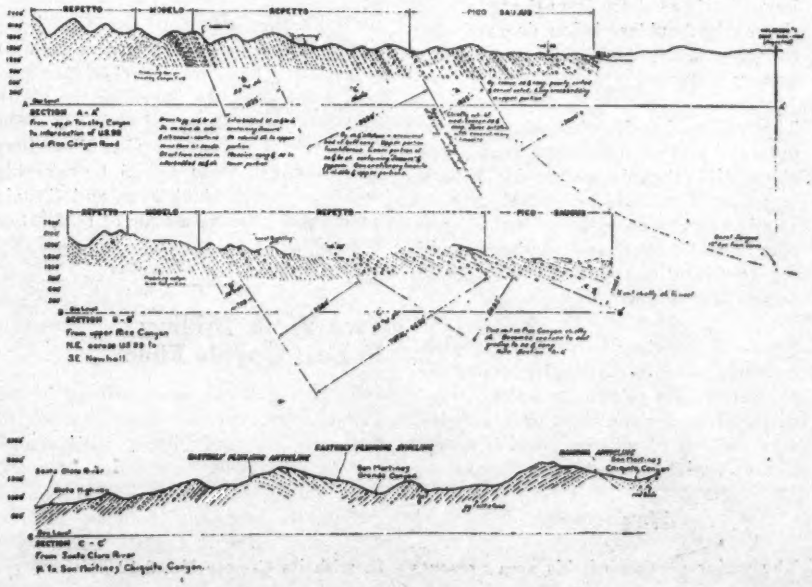
2. That geophysical work in this situation, where there are surface outcrops close to the line being shot, is unreliable, due to the large number of anomalous returns on the records.

Overturning

Overturned beds are common in competent sandstone beds on both sides of the river. In the area between sec. 24, T. 4N, R. 18W, Ventura Co., and San Martinez Grande Canyon there is much overturning, giving the appearance of an anticline.

South of the river, on the north flank of the Pico anticline, the competent sandstones of the "D" unit are overturned in several localities.

Faulting: The only faulting of note



occurs on the broad, rolling field defining the Newhall-Potrero Field where the wells R.S.F. No. 1 and No. 2 producing, and R.S.F. No. 3 drilling, are located. The structure is an anticlinal nose plunging 20-25 degrees to the northwest and closed by a strike fault near the southern edge of the Potrero.

At the southwest corner of the Potrero, the Salt Canyon cross-fault has an approximate north-south trend. Displacement is probably up on the west side.

Sedimentation and Lithologic Facies

Field work in this area has revealed and made possible an interesting study in the lateral graduation of marine and continental sediments. The Ventura Basin, of which this area is the eastern portion, was apparently long and narrow during Tertiary times. The Pliocene-Plesitocene section is 15-20,000 ft. thick in the center of the basin and thins to less than 1000 ft, near the edges. The formations involved in this section are commonly referred to as the Repetto, Pico and Saugus. They are all thicker along the southern edge of the area than on the north.

Having the sources of sediments close to the area accounts for rapid facies changes along certain stratigraphic horizons in the formations. Steep initial slopes with depositing currents rapidly losing their transporting power, gave coarse, massive, marginal and deltaic conglomerates and sandstones, which grade westward through fine sandstone into offshore silt and silty shale. Frequently, this occurs within a mile, and all are stratigraphic equivalents. Some of the conglomerates were deposited in areas immediately offshore from the mouths of rivers, the boulders being dropped near the mouths, the sand being carried out a greater distance.

The factor of facies changes, where the outcrops are not continuous or well exposed, gives the false impression of faulting; that is, a shale bed, apparently the stratigraphic equivalent of an adjacent conglomerate or coarse sandstone, with the transition not exposed, may be interpreted as a fault.

South of the river it is possible to approximate the formational contacts and to describe the column by units. North of the river, for the most part, silts and silty shale predominate, forming a massive unit with few sandstone breaks.

Physiography

The major portion of this area presents the maximum in ruggedness. South of the river the topography is an exact reflection of the structure, with main ridges striking N 60-70° W, and large canyons cutting across the trend. Branch stream canyons are subsequent and follow the strike.

The average elevation along U. S. No. 99 is 1400 ft. above sea level; that of the high ridge along the Pico anticlinal axis is 2600-2800 ft. The upper slopes with sharp divides are underlain by sandstone, and where not too steep are covered with dense brush.

Along U. S. No. 99, between the Beacon Station and Pico Canyon, a broad slope dipping gently toward the north is a Pleistocene terrace of river gravels which lap over the steeply dipping Saugus conglomerates.

North of the river and basinward to the west, the Pliocene section becomes thicker with fewer sandstones and more silt and silty shales. These are not very resistant to weathering or component to folding, with the result that the hills, while of great relief, consist of rounded, grassy, and brush covered slopes, with topography little influenced by structure. Elevations vary from 800 ft. above sea level at the Santa Clara River, to over 2000 ft. along the crest.

Field Work

Over 5 months during the spring and part of the summer of 1937 were spent in the field obtaining data. All contacts, as well as prominent interformational beds, were walked out, as facies changes made projecting marker beds unreliable.

Field plotting was done on 7"x9" contact, vertical, air photos, with a scale of 1" to 1500'; from the Fairchild Air Surveys Job C-300. In the office the above field data was transferred to a large base air mosaic of the same scale. Elevations were obtained from USGS topographic sheets of the Newhall, Pico, and Castaic quadrangles, having a scale of 1/24,000 or 1" to 2000'.

Two Wells Drilling In East Coyote Field

Only two wells are now drilling in the East Coyote field as Bartholomae Oil Corp. and Standard Oil Co. continue with routine development programs. On the west flank, the former corporation is drilling its Stern No. 6 below 3350 ft. while the latter is slightly below 4050 ft. with its Coyote No. 2-12.

Chief Geologist Resigns

Angus McLeod

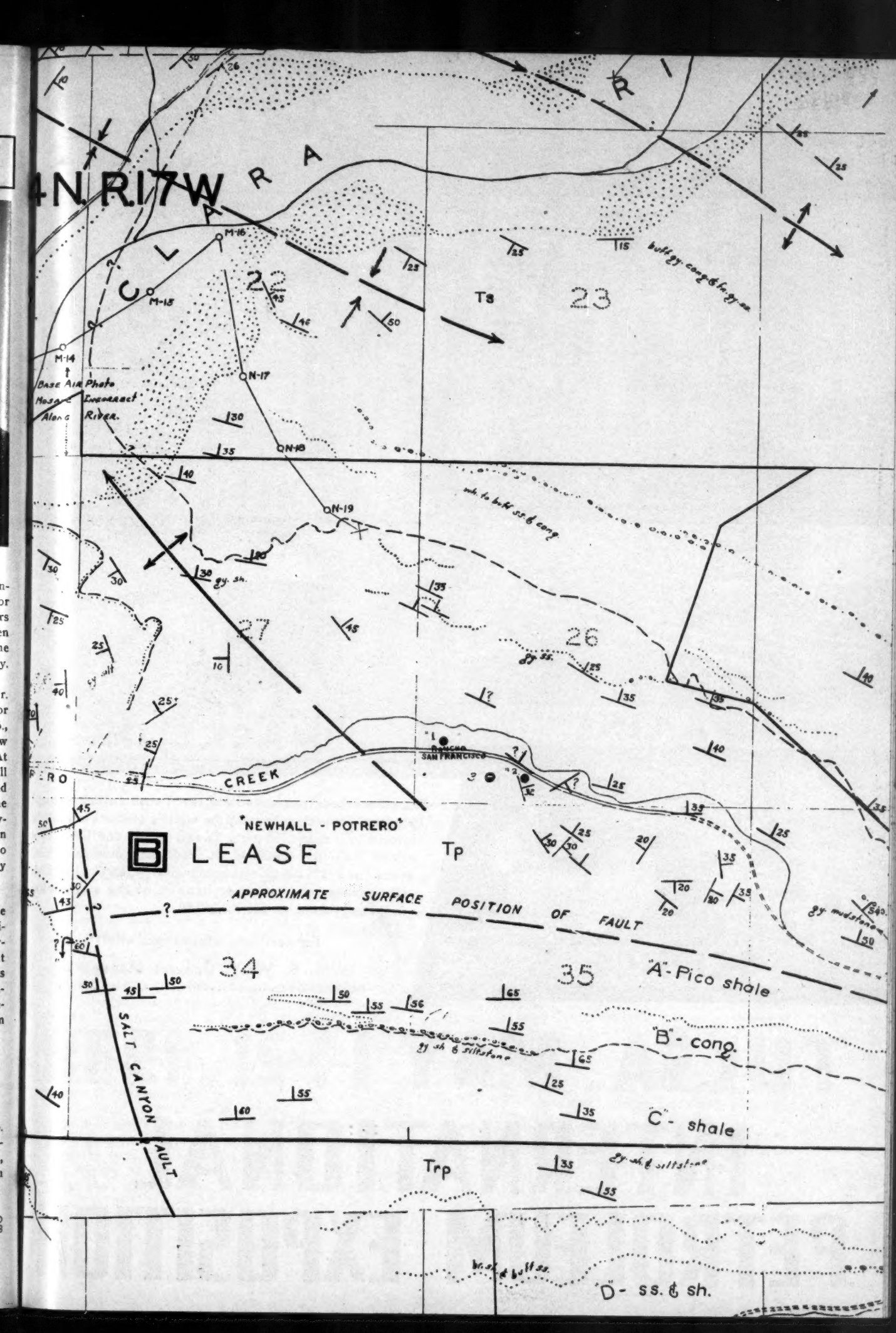
Announcement of the resignation of Angus McLeod, genial chief geologist for the Shell Oil Co., after seventeen years of continuous service for Shell, has been made according to advices from the Los Angeles offices of the oil company.

Prior to his work in California, Mr. McLeod was exploration manager for Shell Petroleum Corp., St. Louis, Mo., having charge of work in Texas, New Mexico, Louisiana and Arkansas. At the beginning of his work there Shell had no production and his staff consisted of but five men. Since that time the company has expanded in that area, having built up large crude reserves. In 1935, Mr. McLeod was transferred to Shell Oil in California, in the capacity of chief geologist.

Mr. McLeod will engage in private work in consulting geology and engineering and will operate in the California, Rocky Mountain and Midcontinent fields. He expects to spend much of his time in the region of his earlier activities, but his family will continue to reside at 757 South Plymouth Blvd., in Los Angeles.

Pico Wildcat Drilling Hard Shale Below 4620

A. S. Johnston Drilling Corp., well No. 32, Pico exploratory project of that company and Universal Consolidated Oil Co., is being drilled in hard shale formation below 4620 ft.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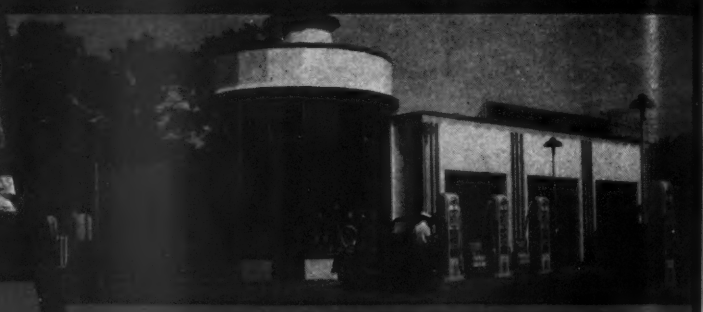

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Long Beach Harbor Wells Set Records

When you drill nearly 4,000 feet and find the bottom of the hole still under the rotary table, you can mark up a perfect score for drilling ability and equipment response. However, when you put down four of these "bull's eye" wells in a row, you are going to arouse considerable curiosity, to say the least, about your experts and the tools they are using. This is an account of four record straight holes drilled in succession in the Long Beach Harbor area by the Kern Drilling Co., for Westgate-Greenland Oil Co.

Summarizing the operations of these four wells drilled by the Kern company on a four and a half-acre property: Well No. L.B.H.D. 1, was spudded in Feb. 12 of this year and finished drilling on Mar. 8, at a depth of 3885 ft. Thirty-six hours and twenty-four hours, respectively, were allowed for the setting of the 18-in. and 13-in. casing. The well was turned into the tanks on Mar. 13.

Well No. L.B.H.D. 2, was spudded in on Feb. 10, and finished on Mar. 8, at a depth of 3887 ft., with the same time allowance as in No. 1, for setting the 18-in. and 13-in. casing.

Well No. L.B.H.D. 3, was spudded in on Feb. 8, and finished on Mar. 2, at a depth of 3880 ft., with the same time allowance for setting casing as in the two preceding wells.

Well No. L.B.H.D. 4, was spudded in on Feb. 10, and finished on Mar. 4, at a depth of 3880 ft., with 60 hours total time having been allowed for the 18-in. and 13-in. casing to set.

In drilling these four wells the Kern Company used eight 17½-in. Crum-Brainard roller cutter drilling bits, averaging 734 ft. of hole with each bit, and eleven 12¼-in. bits averaging 561 ft. of hole per bit. Two 7⅝-in. bits were used to drill out plugs.

The watchful eyes of the Long Beach Harbor Department must have widened considerably when Eastman Oil Well Survey Corp., submitted the findings of their wire line and multiple shot surveying of these four wells. The accompanying table summarizes the results of these surveys. In this table the "maximum drift angle" column shows the maximum angle of deviation from vertical at the most angular portion of the well, whereas the "average drift angle of the well" column shows the sum of all the drift angles divided by the number of readings taken.

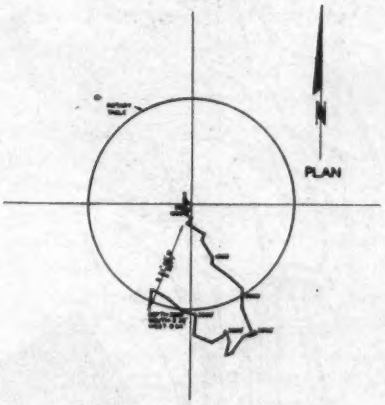
Left, Ed Richards, right, Tom Rowan, of Kern Drilling Co., drillers of the four wells.

Well	Deviation From Vertical		Bottom Depth	Maximum Drift Angle	Average Drift Angle of Well
No. A1	3.85 Feet	@	3885	0° 40′	0° 11.4′
No. A2	3.13 Feet	@	3887	0° 35′	0′ 8.4°
No. A3	5.17 Feet	@	3880	0° 35′	0° 10.8′
No. A4	2.53 Feet	@	3880	0° 20′	0° 8.4′

According to the records of the surveying company, wells Nos. 1, 2, and 4, are the straightest holes the Eastman company has checked in any of the California fields, No. 4, holding the record.

To Test Miocene In Rose Hill Area

Scheduled for a test of the Miocene in the Rose Hill area between Montebello and Whittier, Geo. Langstaff and Associates are starting a new project on the Francis I. Toby property to be known as Iliff No. 1. Leases aggregating 200 acres have been acquired including an old hole drilled to 4612 ft. by Oil & Gas Associates is slated for deepening. Backed by Whittier and outside capital, promoters of the venture believe the same deep sands exist here as were recently uncovered by St. Helens Pet. Co. on the west plunge of the Montebello field and by several operators in the eastern extension.



WESTGATE-GREENLAND OIL COMPANY
L.B.H.D. A-4

The plan diagram above shows the movement from true vertical of the drill bit. Note how closely the course of the hole is held to the area below the rotary table indicated by the large circle. The directional survey was made by Eastman Oil Well Survey Corp., who were authorized to provide the interesting drawing.

LAUGH THIS OFF

One of the Shell boys, just returned from the other side, says he made a tour of Holland in an Austin, and was so mortified when the daschunds kept looking in the windows that he gave the darned thing away.

And **Harold Howard** tells us about the gauger who went on the used car lot and found that he had just enough money to buy the car or the insurance, but couldn't handle both.

Now comes a weird tale from **Walter Wells**, and he claims it is absolutely true: A certain oil man, whom we shall call Smith for obvious reasons, is very much interested in a small church down Long Beach way, in fact he is a deacon. Having been out late one Saturday night not long ago, he fell into a fitful slumber in church next morning, and snored audibly throughout the sermon. At the conclusion of his oration, the preacher announced in loud tones, "We will close the service with a short prayer. Deacon Smith will lead." The deacon awoke with a start and replied, "Tain't my lead. I just dealt."

And then there was the rousty who went to church for the first time, and announced to the lads later that a guy offered him a plateful of money, but he didn't like to take it.

"Who is this fellow Zimmerman?" asked **Frank Coyle**, and **Al Gore** says, "Well if you see two men standing at the street corner and one of them is yawning, the other one is Zimmerman."

At a meeting of the local town council in a Valley oil town recently, there was some discussion of a fever epidemic, and one of the members declaimed, "What this town needs is a supply of clean fresh milk, and the council should take the bull by the horns and demand it."

We were down with **Dick Morrison** to a boxing show the other night, and at the conclusion of the main event half the audience were clapping and the other half were booing. We were somewhat puzzled over the divided reaction until Harry explained that the lads who were clapping were not applauding the fighters, but the booers.

And Superior's **Vivian Williams** tells about the gauger who didn't like deep sea fishing, but just went for the halibut.

We have just been informed as we go to press that **Tom Taggart**, the squire of Palos Verdes, was out golfing last week and hit the ball in one. Tom is the contract expert for the C. N. G. A., and **Jim Craig** is the champion bridge player in the oil equipment group.

On the other hand, **Bert York** tells about a Huntington Beach pumper who has just bought a cute little cottage with every modern improvement—even to the mortgage.

"Have you appeared as a witness in a suit before?" asked the prosecuting attorney, and the oil chemist replied, "Yes, sir." "What suit was it?" continued the p.a. And you could have knocked him over with Exhibit 1 when the chemist piped up, "My blue serge."

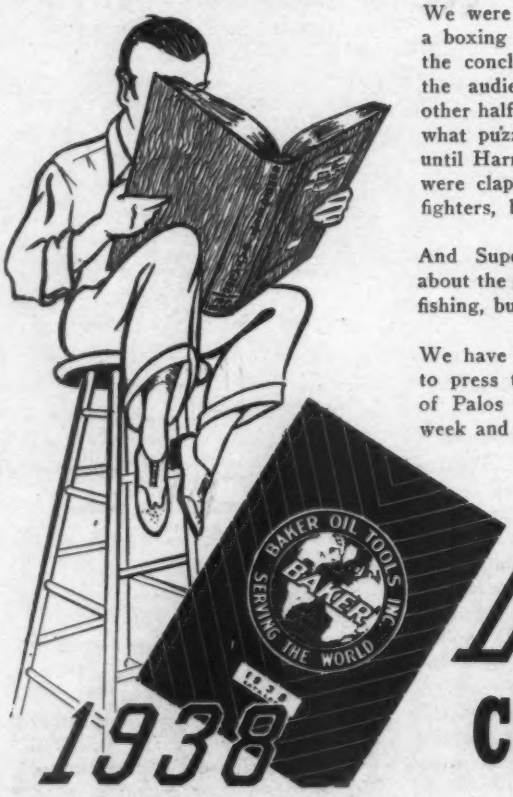
A poor lad up Bakersfield way suddenly found himself affluent when a good well was brought in on his property. To celebrate, he bought a case of champagne. Proving once again that circumstances alter cases.

Says the rousty to the landlady out in the boarding house, "Is it proper to eat pie with a fork?" "Sure," says the landlady. "Well," he quested, "Do you by any chance have a pie I could practise on?"

And as we draw near to the end of another highly educational seance, that erudite individual, **Pat Tracy**, acquaints us with the astonishing fact that a politician is a guy who knows all the answers, and a tax payer is the poor bird who pays for his education.

In conclusion, our readers will be glad to learn that prosperity is definitely here again. Street cleaners are reporting much longer cigar stubs.

And kids are finding it safe to leave their banks around even when dad is at home.



LOOK for the BAKER SECTION in the

COMPOSITE CATALOG

Topatopa Field Discussed

By Louis C. Chappuis

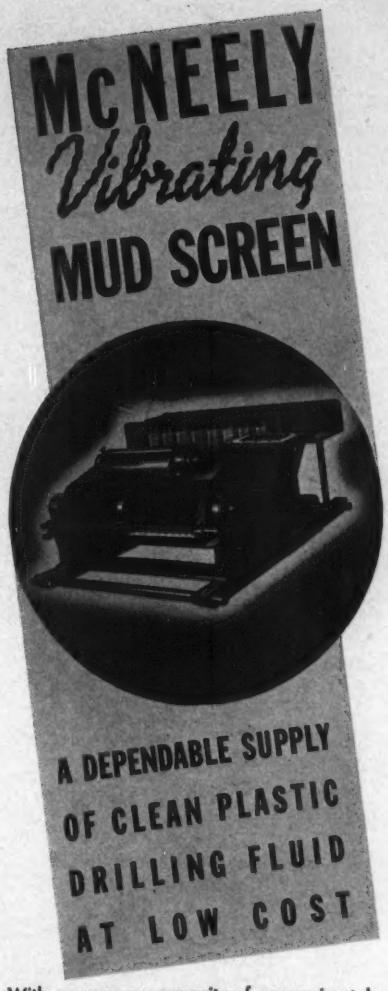
Mr. Chappuis, well known consulting geologist, will present from time to time in these pages thumb nail sketches of areas in California which offer opportunities to independent operators.

A REVIVAL of activities in one of the oldest producing areas of California appears to be on the horizon. Just as history repeats itself the wheel of fortune is in perpetual motion for the oil man. As soon as the damages of erosion caused by recent rains have been cleared away, several new wells are to be drilled in the area commonly known as the Sespe district.

To familiarize the reader with the exact location of this old producing area, the Sespe district lies only a few miles north from the town of Fillmore in Ventura county, and within the confines of T. 4-5 N. R. 19 W.

Credit for the early development and actual discovery of oil in commercial quantities goes to the Union Oil Co. of California. Records from the archives of this company show that one of their first wells drilled and successfully completed was in 1887. This early well was completed for 100 barrels per day of 26 gravity oil from a depth of only 115 feet. The producing horizon is now known to be the Vaqueros formation of most lower Miocene age. Recent development has proven this formation to have a thickness of about 400 feet. The grade of oil found in it ranges in gravity from 25 to 36; has a gasoline content of 45% with mixed base. It is reported from good authority that the Union Oil Co., which still owns in fee in excess of 1500 acres of land in this area, produced in the neighborhood of 3,000,000 barrels of oil from over thirty shallow wells. This production was obtained from the area locally known as the Tar Creek Field. Large oil seeps which at the present time are still producing small quantities of oil were directly responsible for the discovery of this district. The dominant structural feature in this area, is that of a major anticline plunging from the Northwest to the Southeast and known as the Topatopa Anticline. Sporadic development with many failures and few commercial completions has been in progress for the last decade. This area although, considered a Paradise for the independent operator, has been the grave yard for many poorly financed enterprises. The disappointments and failures were not due to the lack of favorable geological conditions, but to the fact that these individuals were misled by the idea that with a few dollars in the bank and a makeshift rig they could tap rich oil deposits. Within the last few years several wells have been drilled and completed from the Sespe formation (Red beds of Oligocene age). The thickness of the Sespe formation at its type locality is about 4000 feet, and consists of layers of fine to coarse sandstone intercalated with clay shales being non-marine in origin. There are three producing horizons or oil bearing zones within the limits of this formation, namely the Upper, Middle and Lower zones. This series has been named by

The well at the upper left is Speik Oil Co. No. 1, now standing full of oil and awaiting pumping equipment. Directly in front is the old Mutual well which, though full of junk, has produced more than 200,000 bbls. since completion 30 years ago. The two wells at the center and right are recently completed producers of the Topatopa Oil Co.



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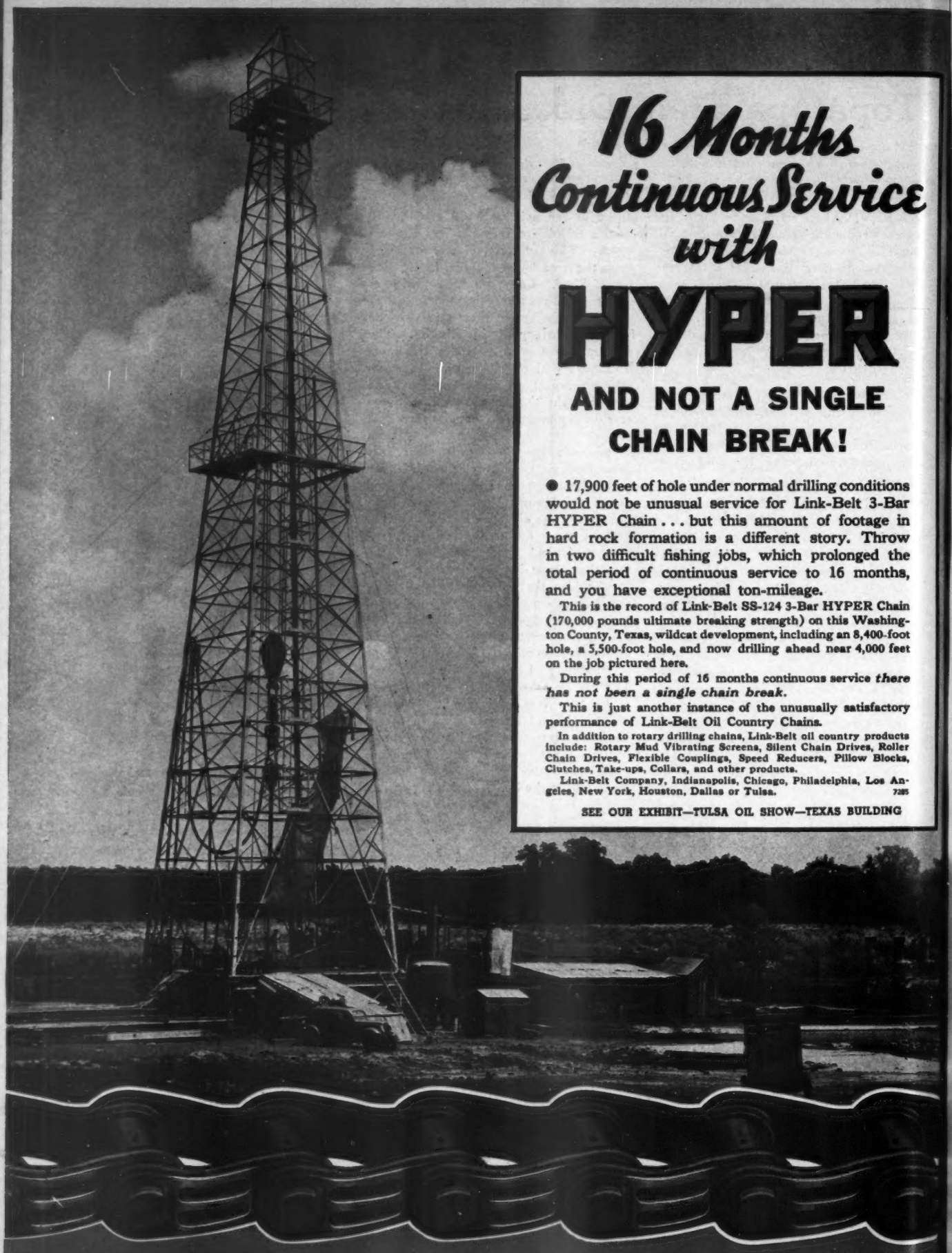

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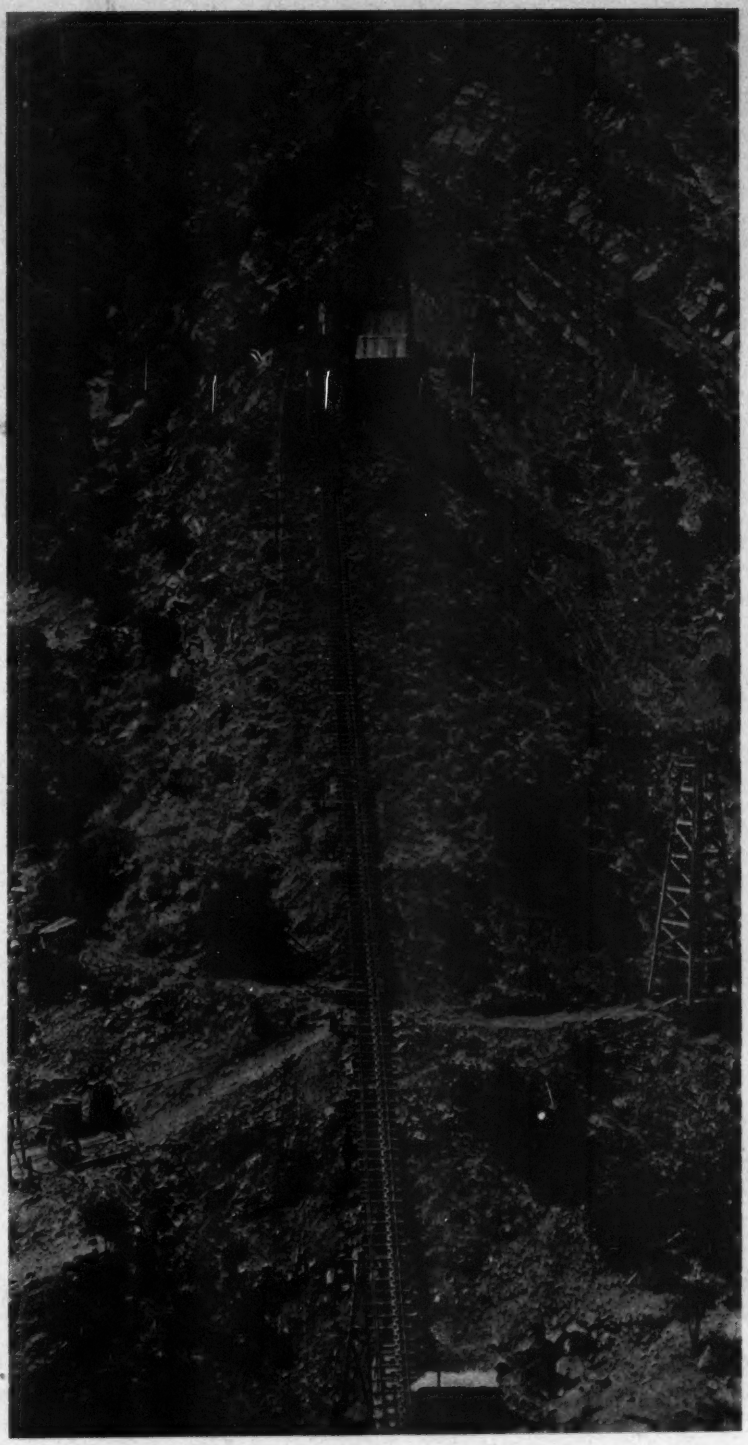
the writer the "Cochran" zone because it was first discovered in the Cochran lease of the Merchants Petroleum Co. The type of oil produced from these various zones ranges in gravity from 15 to 23 degrees A.P.I. with an asphaltum base. At present there are several producing properties located along the axis of the so-called Topatopa anticline. Wells range in depth from 1500 to 3500 feet. Initial production of these wells varies according to their location with reference to structure and the type of stratigraphic reservoir encountered. Completions of from 25 to 200 barrels per day have been common. Though early decline is rather rapid, these wells are characterized by unusual longevity. In addition to those producing from the Sespe rocks, there are at present several old wells still producing small quantities of high gravity oil (36° A.P.I.) from the Vaqueros formation (Lower Miocene).

One of the outstanding wells of this area is the old Mutual well located on the SE¼ of section 33 T. 5 N. R. 19 W. Completed in 1908 from a depth of 3600 feet, recovery to date has been in excess of 200,000 barrels of 36 gravity clean oil. This production is remarkable when one takes into consideration the fact that the hole caved in on a string of tools which were never recovered, and that the production has been coming into the hole through this obstruction. No liner was ever set in this well, and to the writers knowledge the well has not been pulled for over ten years. This well produces regularly, every day of the year 12 barrels of oil with a large quantity of wet gas. During recent years two more wells have been completed on this lease with a combined output of 50 barrels per day.

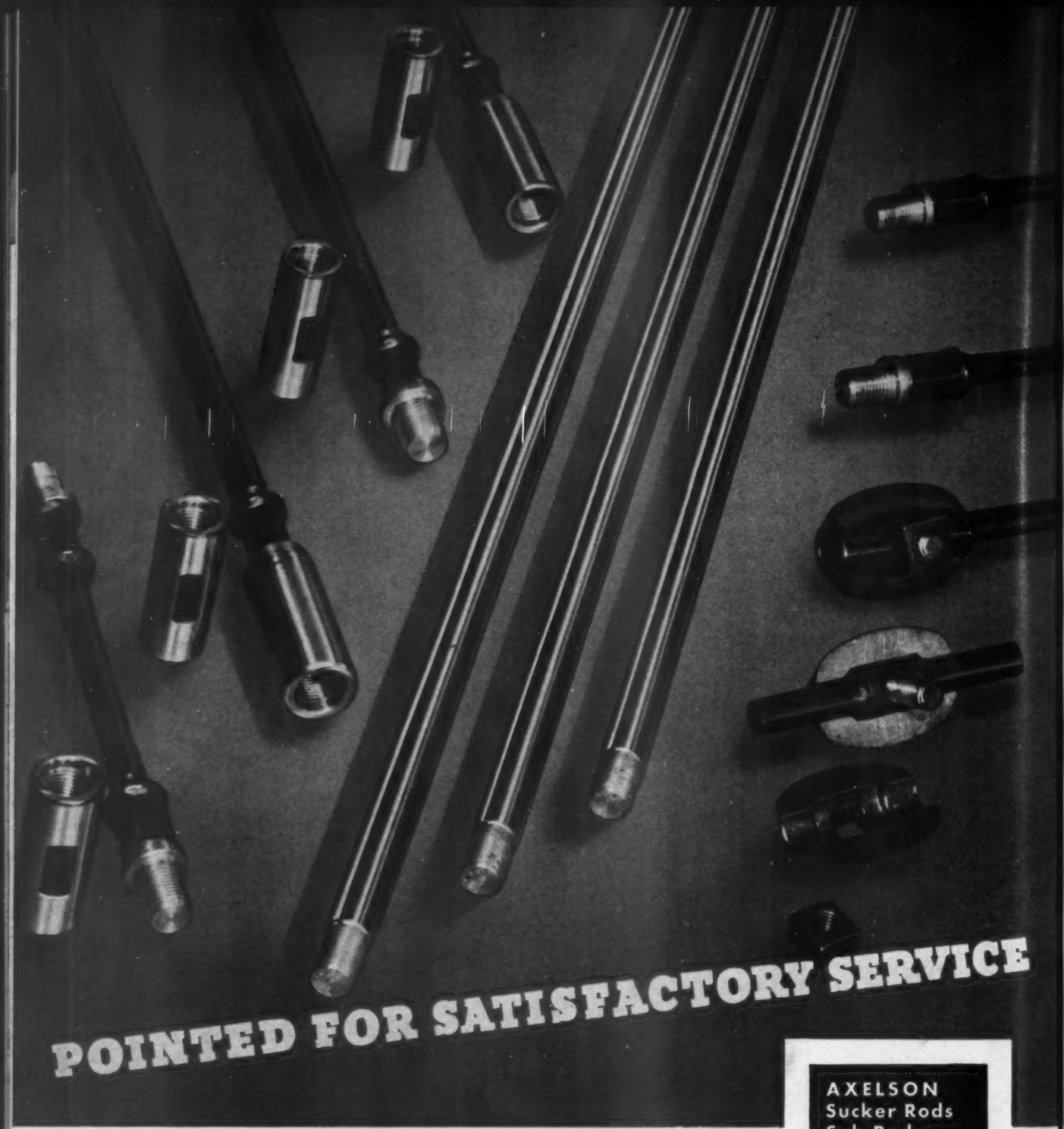
Present development in this area is now confined to two drilling wells namely the Section 20 Oil Co. and the Speik Oil Co., both these wells are well located along the axis of the Topatopa anticline and should develop into commercial producers.

In the past, poor accessibility to these properties was a handicap hard to overcome, and many wildcatters who liked the area were discouraged by the costs of building roads. Within the last two years the U. S. Government by means of the Civilian Conservation Corps. has built two good mountain roads into this area, thus bringing closer to civilization and supplies a district that offers many good possibilities for obtaining high grade oil at shallow depths.

In the next issue, Mr. Chappuis will discuss the Sespe field and Hopper Canyon area.



Merchants Petroleum Co. solves a difficult problem in a simple fashion. Structural features here are "as plain as the nose on your face," but the geologist must be equipped with the technique and execution of the mountain goat to do his mapping. The highly efficient tramway is said to interfere somewhat with yodelers at the rig. C.C.C. built roads have made the area accessible. It was in fields similar to this that commercial production was first developed in California.



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PRODUCTION :-: DEVELOPMENT

(Figures of Production and Stocks are in barrels of 42 Gals.)

	Total Production February	—DAILY AVERAGE— Feb., 1938	Jan., 1938	Feb., 1937
Group No. 1				
Belridge—North	423,447	15,123	15,581	14,897
Belridge—South	45,319	1,618	1,552	1,845
Canal	36,684	1,310	465	.....
Canfield Ranch	3,473	124	20	.....
Coalinga	312,146	11,148	14,891	15,040
Edison	103,828	3,708	3,659	4,878
Elk Hills	309,340	11,048	10,936	8,828
Fruitvale	260,672	9,310	9,639	8,924
Greeley	102,926	3,676	3,680	445
Kern River	412,124	14,719	14,772	15,237
Kettleman Middle Dome	2,253	80	83	184
Kettleman North Dome	2,251,647	80,416	81,352	77,612
Lost Hills	103,476	3,696	3,638	3,922
McKittrick	120,889	4,318	4,252	1,677
Midway-Sunset	2,083,034	74,394	75,492	67,858
Mountain View	378,323	13,512	13,968	21,125
Mount Poso	572,964	20,463	20,384	17,795
Rio Bravo	46,827	1,672	2,582	.....
Round Mountain	485,524	17,340	18,201	11,434
Ten Section	128,178	4,578	3,887	1,163
Wheeler Ridge	8,757	313	313	333
Group No. 2				
Capitan	84,626	3,022	3,095	1,614
Elwood	215,509	7,697	7,664	9,368
Rincon	100,896	3,604	3,189	2,508
San Miguelito	116,401	4,157	4,065	2,610
Santa Barbara	14,065	502	523	1,001
Santa Maria	437,036	15,608	15,850	5,510
Summerland	911	32	32	38
Ventura Avenue	1,035,687	36,989	36,337	33,392
Ventura-Newhall	155,020	5,537	5,277	4,830
Watsonville	1,400	50	60	60
Group No. 3				
Brea-Olinda	175,533	6,269	6,151	8,068
Coyote—East	111,725	3,990	4,053	3,238
Coyote—West	226,672	8,095	9,465	7,439
Domingues	821,012	29,322	30,192	24,632
El Segundo	467,914	16,711	19,450	1,990
Huntington Beach	973,248	34,759	34,511	36,425
Inglewood	448,461	16,016	16,046	13,405
Lawndale	2,520	90	97	91
Long Beach	1,611,387	57,550	57,040	62,240
Los Angeles-Salt Lake	15,295	546	575	832
Montebello	238,862	8,531	8,225	9,783
Playa Del Rey	200,813	7,172	7,311	10,371
Potrero	11,105	397	381	282
Richfield	278,368	9,942	9,771	7,762
Rosecrans	178,139	6,362	5,558	2,223
Santa Fe Springs	1,136,333	40,583	40,666	44,040
Seal Beach	274,245	9,794	9,452	9,312
Torrance	224,350	8,013	7,704	7,971
Whittier	25,808	922	896	945
Wilmington	2,832,563	101,163	66,870	4,660
Total	20,607,735	735,991	709,943	589,837
January	22,008,235	709,943		
Increase (*Decrease)	1,400,500*	26,048		

STOCKS HELD IN PACIFIC COAST TERRITORY BY CALIFORNIA OIL COMPANIES

	Feb. 28, 1938	Jan. 31, 1938	February Changes	Dec. 31, 1937* Reclassified
1. Fuel Oil Residuum and Non-Gasoline-Bearing Crude	74,428,663	71,758,162	+2,670,501	68,529,388
2. Gas Oil and Diesel Oil	9,103,824	8,865,191	+ 238,633	8,648,990
3. Gasoline-Bearing Crude	31,104,054	29,393,330	+1,710,724	29,417,842
4. Unblended Nat. Gas	2,390,076	2,121,425	+ 268,651	2,001,204
5. Gasoline (not including distributing and service stations)	15,134,960	14,443,190	+ 691,770	13,520,678
6. Naphtha Distillates	1,587,174[1]	1,333,075[1]	+ 254,099	1,464,577[1]
7. All Other Stocks	4,778,383[2]	4,769,380[2]	+ 9,003	4,457,568[2]
TOTAL	138,527,134	132,683,753	+5,843,381	128,040,247
[1]Estimated amount of unfinished gasoline contained in item 6	1,389,001	1,160,639		1,248,291
[2]Coke included in item 7	22,142	22,190		22,435

	New Rigs Up	Producers Active Drilling	Com-pleted	Daily Initial Output	Active Pro-ducing	ABANDONED WELLS Drillers	Pro-ducers
Group No. 1							
Belridge—North	4	9	2	1,718	56	....	....
Belridge—South	..	....	....	....	130	....	....
Canal	3	2	2	4,392	3	....	....
Canfield Ranch	..	....	....	....	1	....	....
Coalinga	2	3	....	..	909	....	4
Edison	1	2	....	....	88	....	1
Elk Hills	..	....	1	10	172	....	....
Fruitvale	..	1	3	709	164	....	....
Greeley	2	8	....	....	12	....	....
Kern River	2	3	1	6	1,352	....	....
Kettleman Middle Dome	..	1	....	....	3	....	....
Kettleman North Dome	2	13	2	2,454	187	....	....
Lost Hills	2	3	....	....	220	....	....
McKittrick	2	2	....	....	214	....	....
Midway-Sunset	3	8	4	456	2,542	....	4
Mountain View	..	1	....	....	193	....	2
Mount Poso	7	4	1	298	277	1	....
Rio Bravo	1	7	....	....	1	....	....
Round Mountain	3	6	1	300	174	....	....
Ten Section	2	4	3	5,196	13	....	....
Wheeler Ridge	1	....	....	....	26	....	....
Group No. 2							
Capitan	..	....	....	....	44	....	....
Elwood	..	....	....	....	63	....	....
Rincon	..	2	....	....	39	....	....
San Miguelito	..	....	1	161	16	....	....
Santa Barbara	..	....	....	....	36	....	....
Santa Maria	10	22	8	11,914	290	....	....
Summerland	..	....	....	....	18	....	....
Ventura Avenue	4	8	....	....	249	....	....
Ventura-Newhall	1	4	2	651	554	....	....
Watsonville	..	....	....	....	7	....	....
Group No. 3							
Brea-Olinda	..	1	....	....	355	1	....
Coyote—East	..	....	....	....	88	....	....
Coyote—West	..	....	....	....	47	....	....
Domingues	1	3	2	522	178	....	1
El Segundo	..	3	4	3,130	62	....	....
Huntington Beach	1	1	....	....	559	....	....
Inglewood	..	....	1	267	199	....	....
Lawndale	..	....	....	....	6	....	....
Long Beach	4	7	4	376	1,242	....	1
Los Angeles-Salt Lake	..	....	....	....	113	....	....
Montebello	4	5	....	....	209	....	....
Playa Del Rey	..	....	....	....	200	....	1
Potrero	..	....	....	....	11	....	....
Richfield	3	4	3	167	301	....	....
Rosecrans	..	3	2	1,017	89	....	....
Santa Fe Springs	..	1	....	....	656	....	....
Seal Beach	..	....	1	194	110	....	1
Torrance	..	13	1	180	510	....	2
Whittier	..	....	....	....	143	....	....
Wilmington	47	44	20	44,343	402	....	....
Miscellaneous Drilling	8	40	....	....	....	15	....
Group No. 4—Gas Fields							
Buena Vista Lake	..	1	....	....	5	....	....
Buttonwillow	..	....	....	....	21	....	....
Chowchilla	..	....	....	....	....	....	....
Delano	..	....	....	....	1	....	....
Dudley Ridge	..	....	....	....	....	....	....
Goleta	..	....	....	....	1	....	....
McDonald Island	..	1	....	....	4	....	....
Rio Vista	1	1	1	Gas	14	....	....
Semi-Tropic	..	1	....	....	20	....	....
Tracy	..	....	....	....	6	....	....
February	121	242	70	78,461	13,605	17	17
January	127	233	119	85,446	13,544	35	20
Decrease (*Increase)	6	9*	49	6,985	61*	18	3

Field Development

Los Angeles Basin

Wilmington Hits Completions Peak

The Wilmington field is now at the height of its activity. Thirty eight wells are now actively drilling and a new high in number of completions was reached in the past two weeks when 17 were registered. In the older Wilmington townlot sector only a handful of projects are underway, by far the biggest share now being within the Long Beach city limits. Under the present curtailment plan, wells are not being flowed wide open, which results in smaller initial production figures per well. This should not be taken to indicate that the Terminal zones are no longer capable of producing 8000 bbl. wells as it is only a reflection of the present tendency of operators to abide by accepted good practice and maintain back pressure on the oil sands as well as keep total field production below the point where market price is effected adversely.

Most significant completion was that of Universal Consolidated Oil Co. on the Newport lease south of 7th St. This well passed through the fault and, bottomed at 4150 ft., was brought in flowing at a rate estimated in excess of 4000 bbls. from both Terminal zones. That this well may mark the eastern limit of Terminal production is indicated by the fact the lower zones were found to be barren in Hogan Petroleum Co., Graham No. 1 a short distance to the east. The latter well is being redrilled in an effort to cross the fault.

One Ranger well, Channel Comm. No. 1, and three lower zone wells, Ford No. 39, S. P. No. 4 and Harbor Comm. No. 15 were placed on production by General Petroleum Corp. All were held to low initials.

Bankline Oil Co. continued its perfect record of big completions by bringing in U. P. No. 3 at the corner of Draw Bridge Way and Tulare Place. Typical of the complicated casing programs used in the area, 11¾-in. was cemented at 2378 ft., 1558 ft. of liner, swedged from 8⅝ in. to 6⅝ in. at 3337 ft., was hung four ft. off bottom at 3891 ft. and cemented through perforations at 2851 ft. and 3371 ft. The 8⅝ portion was perforated from 2378 to 2400 ft., 2530 to 2620 ft. and from 2857 to 3337 ft. while the 6⅝-in. section contained perforations from 3378 to 3891 ft. A 6⅝-in. flow string was set with a packer in the blank section at 2620 ft. and tubing was run with a packer at 3338 ft. The Ranger zone was circulated in flowing through the 11¾-in. casing before setting the flow string packer at 2620 ft., the Upper Terminal circulated in through the flow string before setting the tubing packer and the Lower Terminal swabbed on production through the tubing. In this manner each zone may be produced or shut in independently of the others, in effect making three wells of one. The 4000-bbl. initial from all zones has been cut by one third in accordance with the curtailment program and the upper horizon is entirely shut in.

Hancock Oil Co. completed two wells, No. A-3 and No. A-5, on the shipyard lease, and being Terminal zone wells, first gauges were well over 4000 bbls. Hancock's procedure differs from that outlined above in that a full string of 8⅝-in. casing is set on bottom and cemented through perforations between the Ranger and Upper Terminal zones only. Tubing is then run to within a few feet of bottom and a packer set in the blank section near the cementing point. The two lower zones are then flowed together through the tubing while the Ranger flows around it through the 8⅝-in. casing.

The Termo Co., operating on City of Long Beach land on the west bank of the harbor entrance channel, obtained typically large production in well No. 2 which was recently finished at 3895 ft. Well No. 1 is now being completed from 3905 ft. These wells are approximately 20 ft. lower structurally than those across the channel indicating that the axis extends through the Westgate Greenland lease southeasterly under the ocean floor.

Like General Petroleum, Union Pacific Railroad completed three lower zone wells and one from the Ranger. Those brought in from the Terminal zones were Nos. 51, 70 and 71, the largest being No. 51, which initially flowed over 6500 bbls. No. 50, a Ranger well, on an open flow test made 1413 bbls. a day, making it one of the best from that horizon.

The Superior Oil Co. and A. T. Jergins interests, largest developers of Ranger production in the southeasterly portion of the Long Beach area, finished four wells, Backbay Nos. 2 and 3, Ocean Front No. 2 and Seaside No. 1; the latter being the largest with production gauged at nearly 600 bbls.

Richfield Oil Co.'s deep test at Mitchell and Broadway was plugged from 6078 ft. to 2970 ft. where on the pump it produced only water. It is planned to clean out the old cement and replug as other wells in the area have shown no water and it is probable the plug is at fault.

In the older Wilmington townlot area, Royalty Service Co. is drilling a deep well for Sun Ray Oil Co. which recently took over a large part of the former company's holdings. Located at the southeast corner of "E" and Flint streets, the well, known as Nelson A-6, is being readied for completion after landing 7-in. casing on bottom at 5660 ft. and cementing through perforations at 5548 ft. The lower 105 ft. of pipe is perforated.

C. B. Patton, Meachan No. 1 was found to be wet on a test from 4875 to 4975 ft. and after repairing bad casing is preparing to perforate higher. Fisher & Johnson, Johnson No. 1 obtained only water with a trace of oil on a production test from the plugged depth of 5150 ft.

Operators entering old holes are finding in many cases that casings are in such condition that redrilling must start from the "grass roots".

Deepening in Rosecrans To Reach New Deep Sand

Recent good completions in the Rosecrans and Broadway sector of the old Rosecrans field have resulted in two independent operators taking over abandoned wells to deepen to the new 7600 ft. Miocene zone.

John H. Marion of Huntington Beach has acquired an old hole at the corner of Figueroa and Rosecrans which he plans to deepen from its present 6000 ft. bottom and Woodward brothers, operating under the name of St. Anthony Oil Co. are preparing to deepen the abandoned Union Oil Co., Gordon No. 1.

Barnsdall Oil Co., O'Dea No. 20 has set casing over the top of the zone and Universal Consolidated Oil Co., Trust No. 2 is preparing to complete from 7601 ft. after cementing 8⅝-in. casing at 7300 ft. Union Oil's latest completion, Rosecrans No. 18, is now flowing 460 bbls. of 32 gravity clean oil through a 9/64-in. orifice. The company's No. 19 is now rigging up.

New Operators Drill W. Newhall Wildcat

National Petroleum Corp., under the direction of Mark Jones of Los Angeles, recently acquired the west Newhall exploratory well started late in 1937 by West Coast Development Corp. Located in sec. 27, 4-16, the well was carried to 1200 ft. where it remained idle for two months until work was resumed by the new operator. Formations in this area are very hard and many boulders are encountered. Latest depth reported is 2105 ft.

Third Barnsdall Well Below 2348 in Newhall

Barnsdall Oil Co. is drilling Rancho San Francisco No. 3 below 2348 ft. in the Newhall Potrero field.

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2. SELF-CHECKING H-K CLINOGRAPH *(Hewitt-Kuster)*

"H-K" designed for open holes only—provides permanent, accurate, photographic records of inclination and direction on paper discs five minutes after removing instruments from hole. (U. S. Patents 1,812,994; 2,027,642; 2,093,128 and others pending.)

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Activity Is Resumed in N. W. Long Beach Play

Pacific Electric No. 1, joint venture of A. A. MacDonald, independent operator, and Signal Oil & Gas Co., is now in line to be the next completion in the new northwest extension of Long Beach. After overcoming difficulties in maintaining circulation, surface casing has been cemented at 725 ft. and drilling is progressing satisfactorily below 3150 ft. Top of the Alamitos sand is expected at about 4000 ft.

Richfield Oil Co. has started rigging Bixby No. 5 one location north of No. 4 which completed two weeks ago flowing 575 bbls. a day. East of Hilldon Oil Co. Amebco No. 3, A. S. Johnston Drilling Co. is preparing to spud well No. 31. On the west side of the railroad right of way, Hildon is drilling Pool No. 1 below 2200 ft. and has derrick erected for Pool No. 2. Most northwesterly well in the play is Caminol Co., Inc., Dominguez No. 1-8, now drilling below 2535 ft. John Abrams & Associates, Willis No. 1 deepened to 4642 ft., landed casing on bottom and perforated in the hole below 4630 ft. On the pump, the well produced at a 200-bbl. rate before sanding up. In attempting to clean out the sand, a bailer was lost, resulting in an annoying fishing job.

The two southerly outposts, Marvell Oil Co. No. 1 and Kramildon Oil Co. No. 1 have suspended operations at 3350 ft. and 5570 ft. respectively. Near 31st St. and Elm Ave. Chester F. Yunker completed Barbara No. 2.

Wildcatting Between Wilmington, Torrance

Wildcatting is being done by independent operators on two sides of the Wilmington field. North of the Long Beach harbor development, Pioneer Petrol Corp., headed by Lyle Garner and Ray Underwood, drilling at 2100 ft. near the intersection of 20th St. and Canal Ave. Northwest of Wilmington and on a line with Torrance, Sebastian Kramer is attempting to develop production between the two fields. This well is located at the corner of 253rd St. and Vermont Ave.

Kraemer 2-26 Richfield Completed for 285 Bbls.

Completing Kraemer No. 2-26 in the Richfield field, Standard Oil Co. obtained a yield of 285 bbls. a day, clean oil. A 570 ft. interval is open to bottom at 4550 ft.

Mixed Results in New Del Amo Pay

The new Del Amo zone at Torrance continues to be something of a "not unmixed blessing" with grief and trouble very nearly balancing the small successes achieved.

Superior Oil Co., Torrance No. 5, though not up to C. W. Camp's No. 11 250-bbl. Standard, is the best best recent completion with an initial of 230 bbls. Casing was cemented on bottom at 4959 ft. and perforated between 4820 and 4830 ft. Lakeside Oil Co. bottomed Torrance No. 2 at 4998 ft. and from the interval 4870 to 4975 was completed flowing 175 bbls. of clean 27 gravity oil. W. E. McCaslin, however, was not so fortunate in completing Hutchins No. 1 from 5000 ft. as the 180 bbl. production contained 30% water.

Doyle Petroleum Corp., which has been forced to abandon Getty No. 11 because of mechanical trouble and is now rigging up Getty No. 3, is preparing to test Bond No. 1, and is obtaining only a small amount of oil together with mud and water from Neill No. 2. The latter well is perforated at intervals from 4907 to bottom at 4998 ft.

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May Find New Zone in Montebello Deep Test

Apparently on the verge of another major discovery at Montebello, St. Helens Pet. Co., Monterey No. 24 has cemented 9⅝-in. casing at 5408 ft. over an excellent shale and oil sand series cored but not tested in Monterey No. 20, discoverer of the 6200 ft. Miocene zone in the western portion of the field. Cores in No. 24 ran predominately to oil sand below 5450 ft. with the sand percentage increasing toward the bottom which is now 5781 ft. Indicating the potentialities of the new horizon, a formation test was made with bottom at 5548 ft. during which 34 gravity clean oil reached the surface in ten minutes and flowed at the rate of 1200 bbls. per day with gas production estimated at 10,000,000 cu. ft. Preparations are now being made to test the casing for water shut off after which a liner will be run and the well completed. This well is located 600 ft. southwesterly from No. 20 and correlates 30 ft. lower structurally.

Union Oil Co.'s Paul Howard No. 1, located 1000 ft. due south of Monterey No. 20 and across Lincoln Ave., now is coring for the new horizon below 5284 ft. while Wilcox No. 1 is drilling at 1246 ft. and location has been staked for Fred Howard No. 1.

Near the corner of Beverly Blvd. and Maple, Gus Pongratz is preparing to drill Drake Comm. No. 1 for Brookline Oil Co.

West Extension Work Dropped in El Segundo

Writing the last chapter in the history of western extension in the El Segundo field, Wilshire Oil Co. has abandoned El Segundo Construction Co. No. 1. Drilled to the top of the schist at 7407 ft., a series of fishing jobs hampered tests which eventually showed the formation to be wet.

The Termo Co. Elsie No. 2 is now on steady gas lift production at 250 bbls. a day after it was discovered the tubing was defective. The oil is 23 gravity and free from water.

Soverign Oil Co.'s El Segundo No. 1 was bottomed at 7355 ft. and is now on production for 975 bbls. a day.

Ohio Oil Co. Gough No. 12 is rigging up and from appearances will be the field's only drilling well for some time in the future unless Standard Oil Co. chooses to further develop its proven land.

No Developments in Huntington Deep Test

The current Huntington Beach deep test, W. P. R. Oil Co. No. 1, located in the central portion of the field, apparently has not discovered a commercially productive horizon. Drilled to 7410 ft., the well has been plugged and tested by stages with fluid recovery being nearly all water. Acid treating has been resorted to in an effort to increase the oil percentage.

On the old Ambassador lease, Armor Petroleum Co. redrilled No. 11 to 2016 ft. where the well will be recompleted in the tar zone.

The Termo Co. has completed McIntyre No. 1, a tideland well, after redrilling to 5303 ft. and landing 4¾-in. perforated casing at bottom. On the pump, the well is averaging 350 bbls. a day of 23 gravity oil.

Two reconditioning jobs are underway by major companies. The Texas Co. is cleaning out Pearce No. 1 and Standard Oil Co. is redrilling Huntington A-13.

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Rapid Progress In Rio Bravo Activities

Events move rapidly at Rio Bravo, the world's deepest oil field. Within a few days Superior Oil Co. brought in its second well, the third for the field, made a mysterious "hold out" of Ruhl No. 1 while Union Oil Co. encountered trouble in Kernco 34-2.

Superior's completion, Geissinger No. 1, finished in the remarkable elapsed time of 85 days from spudding, was bottomed at 11,288 ft. with 7-in. casing cemented at 11,238 ft. From this 50-ft. interval the well was brought in with initial production gauging 883 bbls. of 39.9 gravity clean oil in 19 hours through a 15/64-in. opening under 1900 lbs. flow pressure. Gas production metered 1,077,000 cu. ft. One location north of the company's Wagner No. 1 in sec. 35, and offsetting Union's Kernco 34-1 discovery well, Geissinger No. 1 cored the oil sand at approximately the same depth as its predecessors and contributes little in new knowledge of the field.

Ruhl No. 1, a semi-wildcat located in sec. 1, 29-25 and a mile southeast of production, became a "no dope" hole when the 11,300 ft. mark was passed and no oil sand had been found to that depth. Rumor has it that the well is correlating about 150 ft. lower structurally than wells in the discovery area.

Union Oil Company's second well, Kernco 34-2, got into trouble when fluid was swabbed down to test the water shutoff on 7-in. casing cemented at 11,200 ft., five feet off bottom. When it was found the swab would not go below 6100 ft., an attempt was made to pull the tubing. Tubing, however, could not be pulled and it is believed the casing has collapsed crushing the smaller pipe.

Unless Union's difficulties are quickly overcome, Superior Oil Co. by virtue of its larger rigs and consequently faster drilling, will complete a third well ahead of competing operators. Wagner No. 2, one location southeast of No. 1, was last reported at 11,292 ft. with good possibilities that the top of the oil sand would be found in the last core.

Two wells are drilling below 10,000 ft.; Geo. F. Getty, Inc., Ramsey No. 1 and General Petroleum Corp., Wagner No. 1 while G. P., Wagner No. 2 and Superior Oil Co., Wagner No. 3 are below 7000 ft. Derrick is up for Superior's Anderson No. 1 and Union is installing foundations for Kernco 34-3.

Petroleum Securities May Score Discovery

Petroleum Securities Co., Gatchell No. 2, located in sec. 18, 20-16, is now the most talked of well in the San Joaquin Valley. Although the company flatly refuses to give out information, careful estimates place the bottom of the hole at 6860 ft. and it is definitely known that it is plugged back. A sand zone cored immediately below 6700 ft. is believed to be the "Avenal" of Kettleman Hills but information is lacking as to whether or not it contains oil. In all probability casing will be run and a production test made. Located on a line with and half way between Kettleman Hills and Coalinga, a completion here would mean the discovery of an entirely new field and would, indeed, be a feather in the cap of the company.

Two Wildcats Left In Fresno Co. Play

Recent abandonments have taken a heavy toll of Fresno County wildcats, leaving only two important active deep wells. East of Coalinga in sec. 31, 18-17, Pure Oil Co. S.P.L. No. 1 has been held up at 10,861 ft. with a fishing job, but with good luck should soon be again making hole.

Near old Coalinga production, Shell Oil Co. deepened Italo Pet. Corp., Conlon No. 1 to 3160 ft. in the Moreno, and, finding no production, transferred operations to Section One Oil Co. No. 1, sec. 35, 20-14, where drilling is in progress below 1135 ft. Light portable equipment is being used. In the Clovis area, Central Valley Oil Co. No. 1, sec. 1, 12-20, was last reported as drilling below 600 ft. Panoche Hills Oil Co. operating in sec. 12, 14-11, is fishing for drill pipe lost on bottom at 635 ft.

Shell Sec. 29, 29-27 Wildcat Coring at 7130

Shell Oil Co., KCL A-58, wildcat test well in sec. 29, 29-27 southwest of Fruitvale, is abandoning at 7215 ft. Oil showings were entirely absent.

Spot Second Well In Sec. 1, 29-20

Chico Martinez Oil Co., operating on the Exeter lease in sec. 1, 29-20, Temblor Hills, has announced the location of a second well to be drilled in lot three. Exeter No. 1, with bottom plugged from 1065 to 1050 ft. looks as though it should make a satisfactory small pumper if persistent sand difficulties can be overcome.

Continental Wasco Now Running Liner

With the world depth record safely in the bag with 2218 ft. to spare, Continental Oil Co., KCL A-2 will test for production from 15,004 ft. After having passed from the Miocene into the Eocene without finding the long sought oil sand, the company suspended drilling, electrically logged the hole and is preparing to run a line to test gas and oil showings which appeared on the ditch. The liner will be perforated at intervals below 13,100 ft. Due to the fact that only sand streaks have been cored in the last 1000 ft., shale bodies being drilled as an economy measure, the exact top of the Eocene is not definitely known, but sufficient evidence exists to believe it to be in the neighborhood of 14,650 ft. as foraminifera below that point appear to be definitely of that age.

Indicative of some of the difficulties to be overcome in future deep well drilling, a survey of KCL A-2 is now impossible because of the high temperatures encountered. The last bottom hole temperature recorded was 284 degrees, Fahrenheit, and was sufficiently high to completely destroy the batteries of a surveying instrument even though encased in dry ice when the run was started.

Regardless of the economic loss, should this be a dry hole, Continental has contributed greatly to the engineering and technique of drilling and to a more thorough understanding of San Joaquin Valley geology. The well is at the same time a triumph for equipment designers and manufacturers and a challenge which they must meet in the future when wells of similar depth become commonplace. Total cost of the well to date is estimated by company officials at under $350,000.

Seek Grapevine Well Bottom Water Shutoff

Activity in the Grapevine area is virtually stalemated pending the outcome of tests now being made in Universal Consolidated Oil Co. Reserve-Tejon No. 1 in sec. 33, 11-19. After pumping 50-50 oil and fresh water for several weeks, the well was taken off production and replugged to 4550. Deepened to 4988 ft. to determine the extent of oil sand, the hole was originally plugged to 4634 ft. when lower formations were found to be wet. It is believed that shutting off of the bottom water will return the well to its former flowing status.

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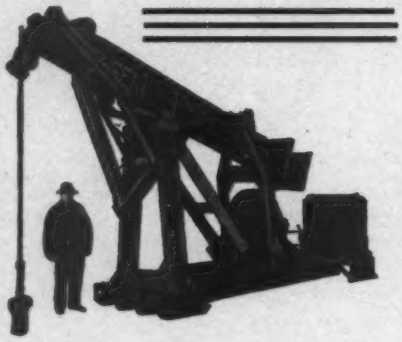
Third Kettleman Well Taps New Avenal Pay

Standard Oil Co., 27-21J in sec. 21, 21-17 became the third Kettleman Hills well to tap the new Avenal (Eocene) horizon when the top of the sand was picked up 10,720 ft. A 6⅝-in. water string has been cemented prior to testing for production.

Kettleman North Dome Association's second deep well, 67-20J in sec. 20, 21-17 is now below 10,500 ft. and preparing to core for the sand.

Eighteen strings of tools, divided equally between Standard Oil Co. and KNDA, are now active in the field beside several projects in preliminary stages.



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Greeley Outpost Results Slowing Developments

Severe disappointment in the results obtained from outpost wells has caused a notable decline in the development rate at Greeley, with only three wells now drilling and one in the process of completion. Apparently destined to become another "gasoline well", KCL No. 11-13, in the southwest quarter of the northwest quarter of sec. 20, 29-26, is being readied for completion after a formation test from 7650 to 7740 ft. resulted in a 180 bbl. flow of 64 gravity oil and 8,300,000 cu. ft. of gas.

Standard Oil Co. is making very slow progress with KCL No. 11-2, sec. 20, which is being deepened in search of the sand body productive at Rio Bravo. No data is available on formations encountered and bottom is understood to be slightly below 10,600 ft. KCL 11-14, a north line well located in sec. 18 between 11-8A and 11-10, is now drilling below 7321 ft. and should pick up the sand within a few days. Ross No. 1, one location east of Fleishauer Comm. No. 1 and the most southeasterly in the field, is making satisfactory progress below 6500 ft.

Metro Well Purchase Revives Edison Interest

A possible revival of lagging interest in the general vicinity of Edison is seen in the announcement of Siemon Bros. of Bakersfield of their acquisition of the old Metro well in sec. 6, 30-29. After many months of idleness, the well was taken over late last year by McClurken Chemical Co. but no new work was done. It is understood the present owners will prospect deeper for productive sands.

Wood-Callahan Oil Co. has two wells in the area; Porter No. 1, an exploratory well in sec. 20, 30-29 which is idle at 4200 ft., and 21 Comm. No. 2 in sec. 21, 30-29 which is attempting to produce after plugging bottom from 3625 ft.

Richfield Sec. 28, 11-20 Important Southend Test

One of the most important recent southend wildcats in many months got underway recently when Richfield Oil Co. spudded KCL No. 1 on sec. 28, 11-20 near Wheeler Ridge.

Kelley Sec. 20, 28-27 Bailing Salt Water

Kelley No. 2, Kern Front outpost located in sec. 20, 28-27, being drilled by Col. A. J. Rubenstein and Associates, has apparently set 8⅝-in. casing over a wet oil sand. Carried to 3360 ft., and with pipe "O.K.ed" at 3268 ft., bailing tests so far have recovered only salt water with a trace of oil.

Standard 35-23-D Is Good Midway Well

Another good well was recorded for the Midway field when Standard Oil Co. completed No. 35-23-D, sec. 32-24, pumping initially 250 bbls. in 13 hours. Now, with the pump slowed down, production is 215 bbls. a day of 27 gravity clean oil. Bottom was plugged back from 3817 ft. to 3500 ft. before completing.

Conoco Abandons K.C.L.D.-1 Wildcat

Following closely the abandonment of Superior Oil Co.'s KCL No. 9 in sec. 3, 30-26, Continental Oil Co. gave up KCL D-1 a mile south in sec. 10. Drilled in remarkably good time for a wildcat well, only 58 days were required from spudding to official abandonment at 8472 ft. No oil showings were encountered and the usual valley floor gas indications were very nearly absent, the Stevens sand at 8165 ft. and the underlying Bellview sand being entirely barren. Located approximately half way between Standard's Canfield Ranch discovery and the east edge of Greeley, this well is expected to write finis to the intensive exploratory campaign to develop production in the area. Five tests have now been made in an area two miles long and a little more than a mile wide, the deepest, KCL 8 of Superior and Union, going to the unusual depth of 12, 618 ft.

Coring for Vedder In Gline Sec. 17, 26-28

Cresmont Oil Co., controlled by Hillman & Long of Los Angeles, is coring for the Vedder sand in Glide No. 1, sec. 19, 26-28.

Imposition of a Federal income tax on money received from oil extracted from land leased from the State of California was approved by the U. S. Supreme Court on March 7.

Drilling for oil on the west bank of the Los Angeles River flood control channel in Long Beach is not to be permitted. On March 4, Long Beach city voters by a vote of 10,077 to 4128 rejected the proposal.

G. P. in Sec. 12, 28-20 Coring Below 8735

A mile south of North Belridge production, General Petroleum's sec. 12, 28-20 test, St. Helens No. 1 is coring in hard shale formations below 8735 ft. with but few important showings below the shallow high pressure gas zone encountered at 1300 ft. Shell Oil Co. Voight No. 1, sec. 32, 27-20 is coring at 3450 ft.

Two miles east of South Belridge, Ohio Oil Co. Ford No. 1, now rigged with heavy equipment, is drilling ahead in search of deep production with last depth reported at 4515 ft.

Union Berry 1 Arvin Coring Below 6250

With the suspension of activity on Petrex, Inc. No. 1, Union Oil Co. Berry No. 1, sec. 15, 31-29 is the only live project in the Arvin area. Headed for the horizon discovered last fall by General Petroleum Corp., Houchin No. 1 at 7300 ft. Union paused long enough to make a formation test at 5990 ft. but as recovery was only water, the well is now being cored ahead below 6250 ft. Houchin No. 1 was completed pumping 100 bbls. of 30 gravity oil after plugging back from the granite at 7920 ft.

North Tip Lost Hills Wells in Difficulties

Obtaining steady production from north tip Lost Hills wells is a major problem. Argo Pet. Co., Farnsworth No. 1A, sec. 1126-20, bottomed at 1289 ft. pumps 75 bbls. per day rate but sands up within a few hours. Standard Oil Co. is bailing sand from United No. 7 in sec. 2 and Texas Co. has pulled the liner from Theta No. 13 in sec. 11, to scrape the walls of the hole. Theta No. 23, sec. 2, was abandoned when neither commercial gas nor oil could be produced. Tide Water Associated Oil's Williamson No. 10-B in sec. 11 was plugged to 1327 ft. and is pumping to the sump from a 35 ft. interval.

Plan Gas Lift For Semitropic Deep Test

Randolph Comm. 2, Semitropic deep test drilled by Standard Oil jointly with other companies, is experimenting with gas-lift in an endeavor to make a commercial producer. Located in sec. 14, 27-23, the 9535 ft. hole was plugged to 7630 ft. where a perforated liner is landed. Tests to date have showed the hole capable of making only a nominal amount of fluid, mostly oil, and gas, high in pressure but low in volume.

Recondition Quinn 1 In Section 15, 25-27

Dilamar Oil Corp., headed by Sy Wicker of Bakersfield, is rigging up to clean out the old Doyle Petroleum Corp., Quinn No. 1 in sec. 15, 25-27. Drilled to 2956 ft. and plugged to 2875 ft. by the original owners, the well showed a small quantity of oil and Mr. Wicker believes only a minimum of reconditioning will be required to obtain production.

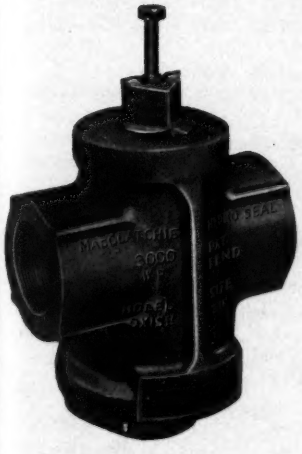
Continental Prospecting Greeley-Ten Section Gap

Moving westward from the lately abandoned KCL D-1 in sec. 10, Contintntal Oil Co. is preparing to spud KCL E-1 in sec. 17, 30-26 for another try for production between Greeley and Ten Section.

Standard Lerdo Test Gives Good Promise

Most interesting of the several valley floor tests now in progress is that of the Standard Oil Co. at Lerdo known as KCL No. 18-1. Located in sec. 29, 28-26, this well is considered by well informed oilmen to have an excellent chance of finding saturated Veddar sands at depth as well as having possibilities in the upper Miocene.

THREE CONCLUSIVE STEPS TO PLUG VALVE SATISFACTION



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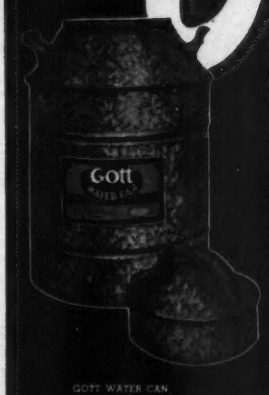

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Coastal District

Seventeen Strings In Santa Maria Area

Seventeen drilling wells and five completions is the sum of Santa Maria news. Drilling activity is now confined to ten operators, Union Oil Co. having the most strings busy. Undisputed title to "Hot Spot" remains with sec. 27 where four of the five completions were registered. Largest of these was Signal Oil & Gas Co.'s Romalho No. 3, which was bottomed at 4850 ft. and brought in with a potential of 4200 bbls. Pacific Western Oil Co. rated second with a 2290 bbl. potential from Samarin No. 3, finished at 4905 ft. Production of over 700 bbls. was obtained from Petroleum Securities Co. Carey No. 1 and Petroleum Equities, Inc., Weber No. 1 which were finished at 5250 ft. and 4320 ft. respectively.

Only completion outside the confines of sec. 27 was Brown No. 3, completed by Bush Oil Co. and Hancock Oil Co. in sec. 25. Bottomed at 4272 ft., 8⅝-in. casing was cemented at 3280 ft. and the well brought in flowing at the rate of 1500 bbls. per hour.

Hancock and Bush are drilling Bradley Lands No. 2 below 2857 ft. in sec. 26 and have staked a location for Hopkins No. 4 in sec. 30, 10-33. California Lands, Inc. is drilling Gallison No. 4 below 3716 ft. and McDonald No. 1, sec. 28, at 3982 ft. Bay City Petroleum Co. No. 1 in sec. 27 has just passed the 4000 ft. mark.

Palm Holding Co., Bill Jr. No. 1 cored the top of the Monterey at 3947 ft. and cemented 8⅝ casing at 3970 ft. Present bottom is 4113 ft. Hanoli Oil Co. is drilling Holser No. 1 below 2317 ft.

Union Oil Co. has located its first sec. 27 well on the McCoy-Cooney lease near the center of the section. In the western part of the field Union is preparing to complete two wells, O'Donnell No. 2-1 in sec. 20 and Silva No. 1 in sec. 24, 10-35. The former well is 5430 ft. deep and logged the top of the Monterey at 5030 ft., while Silva No. 1, located near LeRoy No. 2, cored the Monterey at 4960 ft. and the Franciscan at 5180 ft. Stinson No. 1 in section 28, is drilling in shale at 3520 ft.

Wilson Oil Co., Beaufoy No. 1 in sec. 26 is preparing to set pipe over the top of the Santa Margarita which was noted at 4910 ft.

SAN JOAQUIN VALLEY WILDCATS

Area	Well	No.	Section	Depth	Status
Fresno County					
Coalinga	Conlon, J. M.	1	25, 19-14	100	Idle
	Petroleum Sec., Getchell	2	18, 20-16	6860	Drilling
	Shell Oil Co.	36–1	36, 19-14		Rig
	Conlon	1	30, 19-15	3160	Idle
	Sec. One	1	35, 20-14	1275	Drilling
E. Coalinga	Pure Oil Co., SPL	1	31, 18-17	10861	Fishing
Ciervo	Superior Oil Co., C.U.P.	1	20, 16-13	6001	Abandoned
Clovis	Central Valley Oil Co.	1	1, 12-20	588	Drilling
Jacalitos Hills	Jacalitos Pet. Co.	1	14, 21-15	5745	Idle
Panoche Hills	Panoche Hills Oil Co.	1	12, 14-11	635	Fishing
Kern County					
Arvin	General Pet. Co., Pauley	1	22, 31-29	500	Idle
	Petrex, Inc.	1	32, 31-30	3635	Drilling
	Union Oil Co., Berry	1	15, 31-29	6137	Drilling
Belridge	General Pet., St. Helens	1	12, 28-20	8710	Drilling
	Ohio Oil Co., Ford	1	6, 29-22	4505	Drilling
	Shell Oil Co., Voight	1	32, 27-20	4138	Drilling
Buena Vista	Ohio Oil Co., KCL	A-8	32, 31-26	9225	Drilling
Devils Den	Amerada Pet. Co., Beer	5	22, 26-19	7515	Drilling
	Gibson Oil Co., Alferitz	3	14, 25-18	187	Drilling
	Little Major Oil Co.	1	36, 25-18	250	Idle
Dominion	Dean, Geo. W.	1	26, 26-28		Rig
Edison	British Cons. Oil Co.	1	11, 30-30	100	Idle
	Johnson, G.W. Brown-Paulette	1	33, 29-30	1027	Idle
	Stevens, Ray	1	22, 30-30		Rig
	Wood, Callahan, Porter	1	20, 30-29	4190	Idle
Fruitvale	Shell Oil Co. KCL-A-58		29, 29-27	7215	Abandoned
Grapevine	Richfield Oil Corp. KCL-1		28, 11-20	1325	Drilling
	Universal Cons. Oil Co.	1	33, 11-19	4990	Plug
Greeley	Continental Oil Co. KCL D-1		10, 30-26	8472	Abandoned
	Shell Oil Co. KCL 1B-76		16, 29-26	7110	Drilling
Lerdo	Standard Oil Co. KCL 18-1		29, 28-26	6775	Drilling
McFarland	Tidewater Assoc. O. Co., Pond	1	17, 26-25		Location
Poso Creek	Reynolds Oil Co.	1	30, 27-27	685	Drilling
	Harkness & Laws, Hunt	1	28, 27-27		Foundation
Richgrove	Amerada Pet. Corp.	1	2, 25-27	538	Drilling
San Emigdio	Shell Oil Co. KCL 4-26		26, 11-22	7985	Fishing
Temblor Hills	Chico Martinez-Exeter	2	1, 29-20	1066	Cleaning out
Wasco	Continental Oil Co. KCL A-2		8, 27-24	15004	Drilling
	Standard Oil Co., Randolph	2	14, 27-23	9537	Plug 7630—Testing
Kings County					
Pyramid Hills	Pyramid Prod. Co., Retherford	1	27, 24-18	3090	Idle
Kettleman	Temblor Oil Co., Bunting	1	25, 23-18	9138	Plug 7815—Idle
Tulare County					
Ducor	Crusaders Oil Co.	1	1, 24-27	57	Idle

NORTHERN COUNTIES WILDCATS

Area	Well	No.	Section	Depth	Status
Glenn	Ohio Oil Co., Willard	2	18, 20-2		Rigging up
Humboldt	The Texas Co., Eureka	2	22, 3-1	7708	Plug 6473-Shut in
Monterey	Anderson, A. A., Hillman	1	15, 24-14	4005	Idle
	Elba Oil Co.	1	6, 13-2	4009	Idle
San Joaquin	Standard Oil Co., Weyl Zuckerman	2	25, 2-4	8810	Plug 5279—Completed Gasser
San Mateo	Wilshire Oil Co., Cowell	1	20, 6-5	8007	Plugging & Testing
Solano	Amerada Pet. Co., Mayhood	1	36, 4-2	4345	Gas Well
	Richfield Oil Co., Petrero	1	10, 4-1		Grade
	Standard Oil Co., Anderson	1	1, 5-2		Rig
Sutter	Buttes Oil Fields, Ltd.	3	2, 15-1	6954	Completing as gas well

S. Barbara Wildcat Activity At Standstill

On the Hollister ranch in sec. 35, 5-33, Wilshire Oil Co., down approximately 3100 ft. has been held up with a fish in the hole. After a long period of idleness, United Western Oil Co. has resumed activity on its Los Olivos test in sec. 15, 7-30. Last depth reported was 2975 ft. At Summerland, Gauthier Oil Co. has suspended Permit 17 No. 1 at 1400 ft. Santa Rita Hills area became totally dead with the recent abandonment of the O. C. Field Gasoline Co. well in sec. 11, 7-33. Though several heavy oil horizons were pentrated, no commercial production could be developed. Total depth was 3360 ft.

Standard Oil Co. is having considerable difficulty in drilling a straight hole in Los Flores Land and Oil Co. No. 1 at Cat Canyon, recently having to plug from 5530 ft. and redrill almost from the "grass roots." In sec. 28, 11-28, Claude Fisher is drilling his Cuyama Valley well in hard broken shale below 1300 ft. Carpinteria Oil Co., drilling in the town of that name, has encountered numerous heavy oil showings in the brown shale to 2050 ft. In the Garey area of Santa Maria valley, Valoco Oil Co. is drilling its sec. 28, 10-33 well near the 1600 ft. mark, and Bankline Oil Co. is preparing to spud Silva No. 1 near Orcutt.

Resume Activity In Ventura County

With the advent of dry spring weather, Ventura county operators are again able to work and the first to sieze the opportunity are Merchants Petroleum Co. and Continental Oil Co.

In the Sespe country back of Filmore, Merchants has spudded No. 8 on the Cochrane lease in sec. 1, 4-20. Wells now producing on the property aggregate more than 300 bbls. a day.

Continental Oil Co. is rigging up its Hopper Canyon test, Elkins No. 1 in sec. 23, 4-19. This well will probably test both Miocene and Sespe formations.

Gen. Pet. Rincon Is Gravel-Pack Producer

Ferguson No. 3, General Petroleum's Rincon well which was completed last month with the lower portion of the hole gravel packed instead of the conventionol liner, seems to be a complete success, production having shown no decline from the 140 bbl. initial.

L. B. School Board Asking Lease Bids

Following dissolution by the Superior Court of Los Angeles County of a restraining order by which the Long Beach Board of Education was prohibited from leasing Seaside School site, in the Long Beach Harbor District for oil purposes, and the denial by the same court of a temporary injunction against the taking of bids for the oil lease, the Long Beach Board of Education on Mar. 28, adopted resolutions calling for bids at 4:00 P.M., Apr. 20, at 715 Locust Avenue, Long Beach, California. Bids will be opened at that time and an opportunity given for oral bidding.

Nine methods of bidding, including slant drilling under a community lease, direct drilling under a community lease, a direct oil lease, an an outright sale of the mineral rights underlying the school site are included in the call for bids. Bid forms and the form of leases which will be entered into may be had at the office of the Business Manager of the Long Beach Board of Education, Room 202, 715 Locust Avenue, Long Beach, California.

Morganti 1 Shut in In Section 13, 9-35

Near Casamila, Pima Drilling Co. Morganti No. 1, sec. 13, 9-35, has been shut in after being completed as a small pumper from 1775 ft.

Tunnell, Wood, Neilan Issue Interesting Booklet

A new little booklet, free from advertising but full of wit and philosophy and other items of good-will, carries an offer of $10 from Tunnell, Wood & Neilan, Inc., to the lucky person who submits the most appropriate title.

The booklet, the April issue of which has just been mailed, will be published monthly by Tunnell, Wood & Neilan.

COASTAL COUNTIES WILDCATS

Area	Well	No.	Section	Depth	Status
Santa Barbara County					
Carpinteria	Carpinteria Oil Co.	1	32, 4-5	2065	Drilling
Cat Canyon	Standard Oil Co., Los Flores	1	27, 9-33	5530	Redrilling
Garey	Valoco Oil Co., Haslam	1	28, 10-33	1313	Drilling
Gaviota	Gaviota Oil Co., Hollister	1	35, 5-33	3205	Shut in
	Wilshire Oil Co., Hollister	1	35, 5-33	3080	Fishing
Gato Ridge	Moyle Pet. Co.	1	4, 8-32	3795	Pumping
	Field, O. C., Continental	3	9, 8-32		Grade
Los Olivos	United Western, Bradley	1	15, 7-30	2895	Drilling
Orcutt	Bankline Oil Co., Silva	1	7, 9-33		Rigging up
Refugio	Tweedy, A. E., Penn.	1	34, 5-31	1700	Idle
Summerland	Gauthier Oil Co.	17-1	22, 4-26	1400	Idle
San Luis Obispo County					
Edna	Loma Grande Oil Co., Lewis	1	28, 31-13		Rig
Elkhorn	Calif. Prod. Co.	1	6, 10-24	1550	Idle
	Western Plains Oil Corp.	1	7, 31-21	4010	Idle
Paso Robles	Ajax Land & Dev. Co., Moss	1	27, 26-13	475	Idle
	Vanguard Oil Co.	1	14, 27-14	4360	Idle
Ventura County					
Camarillo	So. Calif. Drlg. Co., Daly	2	26, 2-21	3090	Idle
	The Texas Co., Edwards	1	19, 2-21	6111	Fishing
Oxnard	Oxnard Oil Co., Vanoni	1	10, 1-22	6302	Plug 6200—Idle
	Walter G. Rowe Johnson	1	15, 1-22	4135	Idle
Ojai	High Mesa Oil Co.	1	16, 4-22	1321	Idle
Red Moyntain	Arnett, Frank E.	3	15, 4-21	1167	Idle
Sespe	Commander Oil Co., Temescal	7-F	13, 4-18	215	Idle
	Condor	1	6, 4-19	2195	Idle
	Continental Oil Co., Elkins	1	23, 4-19		Rigging up
	Garmack Oil Co.	1	28, 5-19	565	Idle
	Crosby	1	14, 4-19		Grade
	La Salle & Van Dissen	1	17, 5-19		Grade
	Merchants Pet., Cochran	8	1, 4-20	98	Drilling
	Speik Oil Co.	1	33, 5-19	3440	Rigging pump
	Terry, Geo., et al	1	23, 5-20	1340	Idle
	Williamson Oil Co.	1	1, 4-20	540	Idle
Simi	Trucano, Germanina	1	5, 2-17	1007	Fishing
South Mt.	The Texas Co., Richardson	5	13, 2-21	3350	Drilling
	Clipper Oil Co., Scheiferle	1	17, 3-20		Rig material
Tar Creek	Section 20 Oil Co.	1	20, 5-19	1580	Idle
Timber Canyon	Stallings, Senter, Ahlberg	1	24, 4-21	675	Idle

Gasoline Sales Uptrend Is Noted

A return of the upward trend in gasoline sales in California was indicated during February, the State Board of Equalization reports.

Sales for last month amounted to 118,823,511 gallons, on which a tax totalling $3,564,705.33 was assessed by the Board. This represented a gain of 2.48 per cent over the $3,443,515.11 collected for the same month of the previous year.

Despite the increase over February, 1937, last month's tax still was less than the $3,802,938.78 assessed against January gasoline tax sales. A three-day difference in length of the two months was considered partly responsible for the decrease.

Oil companies reporting sales of more than 300,000 gallons in February were listed by the Board with the explanation that resale of gasoline previously taxed, or exempt sales to the federal government, or interstate commerce accounted for differences between total and taxable sales. These companies were as follows:

	Gallons Actually Sold	Net Taxable Gallonage
Aromalene, Inc.	442,998	363,906
Bachmann Petroleum Corp.	825,854	806,548
Bankline Oil Company	346,464	2,667
Barnsdall Oil Company of California	396,464	None
Belridge Oil Company	1,532,503	6,455
Brown, Henry, dba Operators Oil & Refining	650,478	650,488
Caminol Company, Ltd., The	2,003,576	1,894,856
Chanslor-Canfield Midway Oil Co.	463,085	None
Cowan Oil and Refining Co.	957,001	None
Del Rey Oil & Gas Company	839,726	None
Eagle Oil and Rfg. Co., Inc.	741,864	742,062
East West Refining Co.	446,624	446,624
Edington Oil & Rfg. Co., Ltd.	439,576	439,576
El Camino Refining Company	499,229	483,155
Elm Oil Company, Ltd.	367,285	367,285
El Tejon Oil & Refining Corp.	722,054	705,859
Envoy Petroleum Company	738,272	738,272
Estado Petroleum Corporation	1,850,490	1,850,190
Exeter Refining Company	1,205,931	1,205,895
Fletcher Oil Company, Ltd.	2,292,631	None
F. R. Long, Inc.	1,411,346	None
General Petroleum Corporation of California	24,181,117	10,930,071
Gilmore-Dabney, Inc.	397,752	None
Gilmore Oil Company	5,242,680	117,109
Hancock Oil Company of California, The	2,429,510	2,336,729
Harbor Refining Company	324,913	324,913
Honolulu Oil Corporation, Ltd.	662,702	9,215
Krieger Oil Company	535,794	535,794
Lomita Gasoline Company	1,356,471	None
Los Nietos Producing & Refining Company, Ltd.	2,675,952	576,819
Macmillan Petroleum Corp.	2,468,859	2,303,051
Meek, Herbert A., dba., Henry H. Cross Co., of Calif	318,273	None
McCallen, M. M., dba., M. M. McCallen Refining & Pro. Co.	1,063,223	1,022,785
Mercury Petroleum Corporation	306,578	306,578
Moffett, J. O. (San Fernando Refining Co.)	319,040	318,979
Mohawk Petroleum Company	2,642,443	2,521,876
Norwalk Company, The	1,915,849	1,325,973
O. C. Field Gasoline Corp.	2,150,191	155,581
O. F. Collinge, Inc.	414,719	None
Olsen, G. A., Receiver, Sunland Refining Corporation	526,263	None
Olympic Refining Company	1,366,136	1,280,502
Pacific States Oil & Terminals Co.	2,292,878	2,292,631
Pacific Western Oil Corporation	682,565	1,051
Petrolane, Ltd.	313,265	218,340
Richfield Oil Corporation	15,509,384	12,500,860
Rio Grande Oil, Inc.	3,788,503	None
Petrol Corporation	1,427,588	47,341
Rothschild Oil Company	685,008	648,261
R. R. Bush Oil Company	948,907	948,905
Seaboard Oil Co. of Delaware	1,223,180	None
Seaside Oil Company	2,854,754	1,290,634
Shell Oil Company	25,948,528	13,345,509
Signal Hill Gasoline Company	788,122	None
Signal Oil and Gas Company	1,391,289	None
Signal Oil Company	4,639,519	None
Socal Oil & Refining Company	774,026	774,026
Standard Oil Co. of Calif.	52,164,699	15,579,056
St. Helens Petroleum Company, Ltd., The	917,921	917,628
Sunset Oil Company	2,283,989	None
Superior Oil Company	2,112,391	38,196
Texas Company, The	7,665,898	5,938,546
Tide Water Associated Oil Co.	17,807,504	10,369,726
Triangle Oil & Rfg. Co., Ltd.	20,777,304	11,072,938
Union Oil Co. of California	20,777,304	11,072,938
West Coast Refining Company	351,986	None
Western States Gasoline Corp.	3,067,242	None
Wilshire Oil Co., Inc.	7,244,224	7,033,182
Total Taxed Gallonage		**118,823,511**

Soon to Market New Steel Derrick

A new steel derrick, designed by L. A. Rawson, formerly with Emsco Derrick and Equipment Co., will soon be placed

L. A. Rawson

on the market by Buck and Stoddard, exclusive distributors, with Mr. Rawson in charge of the derrick division.

The derrick has many new features, and will be fabricated in Los Angeles by the Consolidated Steel Co.

Mr. Rawson, designer of the derrick, has had a wide experience in the oil industry, in the fields of Texas, the Mid-Continent, in South America, and in other foreign fields.

U. C. Offers Course In Petroleum Geology

With Apr. 12 as the opening date, the University of California Extension Division is offering a new course in Practical Oil Geology which will meet weekly on Tuesdays at 7 p m at the 815 south Hill street downtown Los Angeles headquarters of the state University's extension division.

LOS ANGELES BASIN WILDCATS

Los Angeles County

Area	Well	No.	Section	Depth	Status
Bellflower	Clayton, Geo. L. Scott	1	32, 3-12	6594	Drilling
Brea	Pressel, Perry, Tull	1	30, 2-9	4560	Idle
Castaic	Royal Land Corp.	1	8, 4-17	427	Drilling
La Mirada	Carmenita Oil Co., Ravera	1	21, 3-11	50	Idle
Lomita	Kremer, Sebastian	1	25, 4-14		Rigging up
Monterey Park	Monte Cristo, Garvey	1	27, 1-2	4240	Idle
Mint Canyon	Christien, J. P.	1	7, 4-14		Rig
	Mint Canyon Oil Co.	1	33, 5-14	1860	Idle
Newhall	Barnsdall Oil Co., R.S.F.	3	26, 4-17	2250	Drilling
	National Pet. Corp.	1	27, 4-16	2050	Drilling
Palmdale	Antelope Valley Pet.	1	17, 6-12	50	Idle
Palos Verdes	Gene McLaren	1	27, 4-14	3992	Idle
	Rolling Hills Pet.	1	27, 4-14	4220	Idle
Pico	British Am. O. P. Co.	1	12, 2-12	3990	Prep. to deepen
	A. S. Johnston, Univ. Cons., Pico	1	5, 2-11	4610	Drilling
Pico Canyon	Burt, A. G.	1	36, 4-17	2550	Idle
San Fernando	Tidewater Assoc. Porter	1	27, 3-16		Location
Towsley Canyon	Towsley Canyon Oil Co.	1	8, 3-16	4100	Pumping
W. Long Beach	Pioneer Petrol Corp.	1	26, 4-13	234	Drilling
Whittier	Fullerton Oil Co., Whittier	5	25, 2-11	1725	Drilling
	Colorado Oil Co.	19	2, 2-11		Location
	Langstaff, Geo. W. Iliff	1	8, 2-11		Rig
	San Bernardino				
Chino	So. Counties Pet. & Drlg. Co.	1	26, 2-8		Rig
	Orange County				
Kraemer	Congress Oil Co., Kraemer	1	36, 3-9	3017	Drilling

California Crude Oil Production

For Two Weeks Ending March 28, 1938

Field	March Daily Quota	Average Daily Production	Excess
San Joaquin Valley			
Belridge—North	17,315	15,208	*2,107
Belridge—South	1,915	1,410	*505
Buena Vista	18,275	17,525	*750
Canal	1,350	1,272	22
Coalinga—East-West	16,770	11,308	*5,462
Coffee Canyon	3,795	4,309	514
Edison	3,180	3,780	600
Elk Hills	8,725	10,978	2,253
Fruitvale	8,020	9,473	1,453
Greeley	4,043	3,165	*880
Kern Front	9,795	9,552	*243
Kern River	5,275	2,723	*2,552
Kettleman No. Dome	81,355	82,377	1,022
Lost Hills	4,800	3,761	*1,039
McKittrick	3,785	3,193	*592
Midway	48,760	50,990	2,230
Mount Poso	17,025	17,517	492
Mountain View	12,460	12,692	232
Rio Bravo	450	1,265	815
Round Mountain	11,210	13,544	2,334
Ten Section	5,160	5,208	48
Other Fields	2,635	2,934	299
TOTAL	286,000	284,184	*1,816
Coastal Counties			
Elwood	6,315	7,204	889
Rincon	2,915	3,680	765
Santa Maria	8,770	3,863	*4,907
Santa Maria Valley	10,000	10,056	56
Santa Paula-Newhall	5,600	5,463	*137
Ventura Avenue	35,760	41,048	5,288
Other Fields	6,630	7,104	474
TOTAL	75,990	78,418	2,428
Los Angeles Basin			
Alamitos-Seal Beach	9,005	9,753	748
Brea-Olinda	8,945	6,013	*2,932
Coyote—East	3,080	3,616	536
Coyote—West	9,375	7,744	*1,631
Domingues	25,780	28,485	2,705
El Segundo	11,425	15,194	3,769
Huntington Beach—New	15,850	20,006	4,156
Huntington Beach—Old	14,680	15,719	1,039
Inglewood	16,090	15,803	*287
Long Beach	50,645	58,537	7,892
Montebello-Extension	7,910	8,183	273
Playa del Rey	6,935	7,002	67
Richfield	8,780	9,957	1,177
Rosecrans-Athens	3,235	6,225	2,990
Santa Fe Springs	34,570	38,896	4,326
Torrance	7,090	7,249	159
Wilmington	57,185	100,706	43,521
Other Fields	2,480	2,529	49
TOTAL	293,060	361,617	68,557
STATE TOTAL	655,050	724,219	69,169

*—Shortage.

Oil Industry Boosts Vocational School

To assist the school districts in the various oil producing centers in presenting study courses on subjects of particular interest to the oil field workers, a Topical Committee on Vocational Training has been appointed by the American Petroleum Institute, Pacific Coast district, division of production, according to an announcement by chairman L. L. Aubert of the Bankline Co.

This committee will assist in the assembly and preparation of pertinent text material, will develop a systematic training of qualified personnel as instructors, and will, in general, lend its efforts to the stimulation of interest in the vocational training program throughout the state.

Courses of study are already being given during the current term in the school districts of Brea, Huntington Beach, Long Beach, Bell, Bakersfield, Taft, Coalinga, Santa Maria, Santa Barbara and Ventura.

The chairman of the new Pacific Coast Topical Committe on Vocational Training is Bruce Barkis, and assisting members are J. P. Rockfellow, secretary; H. S. Stark, W. L. Bagby, J. E. Hollingsworth, and A. D. Jackson. The group is now engaged in a survey of available courses in California.

State Drilling Report

Field	Company	Well	No.	Sec.	Twp.	Range
		NEW WELLS				
Long Beach	Shell Oil Co.	Alamitos	44	28	4S	12W
	Chester F. Yunker	Barbara	2	24	4S	13W
	D. D. Dunlap Oil Co.		13	30	4S	12W
	Richfield Oil Corp.	Bixby	5	13	4S	13W
	Hilldon Oil Co.	Pool	2	13	4S	13W
El Segundo	The Ohio Oil Co.	A. S. Gough	12	7	3S	14W
Montebello	St. Helens Petroleum Co., Ltd.	Monterey	26	2	2S	12W
Whittier	Colorado Oil Co.		19	22	2S	11W
Santa Maria Valley	George F. Getty, Inc	Vicente	4	27	10N	34W
	The Ohio Oil Co.	John H. Morrison	1	27	10N	34W
	Union Oil Co.	O'Donnell	2-2	20	10N	34W
	Union Oil Co.	Stinson	1	28	10N	34W
	Sunshine Oil Co., Ltd.	Wallace	3	27	10N	34W
	Hancock and Bush	Hopkins	4	30	10N	33W
	Hancock and Bush	Bradley	2	26	10N	34W
Mt. Poso	Crestmont Oil Co.	Glide	1	19	26S	28E
Wilmington	Pioneer Petrol Corp.		1	26	4S	13W
	D. D. Dunlap Oil Co.		12	2	5S	13W
	Selegna Drilling & Prod. Co.		11	33	4S	13W
	Union Pacific Railroad Co.	Union Pacific	E-9	3	5S	13W
	Union Pacific Railroad Co.	Union Pacific	PD-1	3	5S	13W
	Union Pacific Railroad Co.	Union Pacific	PD-2	3	5S	13W
	Union Pacific Railroad Co.	Union Pacific	PD-3	3	5S	13W
Rosecrans	Union Oil Co.	Rosecrans	19	18	3S	13W
Potrero	Basin Oil Co.	Potrero	1	34	2S	14W
Ventura	Shell Oil Co.	Gosnell	37	28	3N	23W
	Shell Oil Co.	Edison	31	21	3N	23W
	Tidewater Assoc. Oil Co.	Lloyd	127	27	3N	23W
	Tidewater Assoc. Oil Co.	Lloyd	76	27	3N	23W
	Tidewater Assoc. Oil Co.	McGonigle	11	23	3N	23W
Midway	M. H. Whittier Co., Ltd.	Hondo	16	15	31S	22E
	The Texas Co.		31	32	32S	24E
Canal	Shell Oil Co.	Canal A	81-14	14	30S	25E
Kettleman North	Standard Oil Co.		78	1	22S	17E
		DEEPEN OR REDRILL				
Huntington Beach	Neal H. Anderson	Curtis	2-A	34	5S	11W
	Standard Oil Co.	Huntington B	70	4	6S	11W
Whittier	Standard Oil Co.	Murphy-Whittier	36	26	2S	11W
Torrance	C. C. M. O. Co.	Torrance	34	15	4S	14W
	Chas. W. Camp		2	23	4S	14W
	Williams & Van Valkenburgh	Torrance	9	14	4S	14W
	Sierra Development	Weiler	1	23	4S	14W
	E. H. Grubbs		1	15	4S	14W
	Wm. A. Kirk		5	23	4S	14W
	MacDonald and Burns	Moore	3	23	4S	14W
	Woolner Oil Corp., Ltd.		1	14	4S	14W
	Peters Royalty Corp.	Empire	3	14	4S	14W
	Standard Oil Co.	Martin	1	15	4S	14W
Wilmington	Selegna Drilling & Prod. Co.		7	33	4S	13W
	General Petroleum Corp.	Channel Comm.	3	2	5S	13W
Long Beach	Jahns Drilling Corp.		2	24	4S	13W
	Oceanic Oil Co.	Oceanic	3	29	4S	12W
Rosecrans	Globe Oil Co.	Gordon	1	18	3S	13W
Santa Maria Valley	Union Oil Co.	Enos	1-19	19	10N	33W
Midway	I. B. Dexter	Perris	8	15	32S	23E
	Richfield Oil Corp.	Main Camp	1	24	31S	22E
	Standard Oil Co.		20	33	32S	24E
Elk Hills	Richfield Oil Corp.	Crampton	1-D (A)	1	31S	24E
Mountain View	The Texas Co.	Mateo Smith	5	14	30S	28E
Mt. Poso	Ring Oil Co., Ltd.	Loudon	2	32	26S	28E
		ABANDON				
Long Beach	Russell A. Brown	Feldman	1	29	4S	12W
	Bernal Oil Co.		2	19	4S	12W
	A. T. Jergens Syn., Inc.		8	24	4S	13W
Newhall	York Oil Co.		6	13	3N	16W
El Segundo	Wilshire Oil Co., Inc.	El Seg. Const. Co.	1	12	3S	15W
McKittrick	Rocima Oil Co.		1	20	30S	22E
Kern River	John McKeon, Inc.	Claremont	1-A	32	28S	28E
	Hub Oil Co.	McNeil	1	8	28S	28E
Kern Co.	The Superior Oil Co.	K. C. L.	9	3	30S	26E
	Continental Oil Co.	K. C. L.	D-1	10	30S	26E
Santa Fe Springs	Tidewater Assoc. Oil Co.	Dwenter	4	6	3S	11W
Coyote Hills	Mid-Cities Oil Co.	Yorba-Linda-Day	1	21	3S	9W
Playa Del Rey	Venice Oil Syn. No. 3		3	21	2S	15W
Ventura	Shell Oil Co.	Edison	26	28	3N	23W
Elwood	Bankline Oil Co.		89-7	15	4N	29W
Lost Hills	Tidewater Assoc. Oil Co.		1	11	26S	20E
Kern River	C and C Oil Co.		75	31	28S	28E
	The Texas Co.	Lehmann	4	23	28S	27E
Fruitvale	V. R. G. Wilbur	Fruitvale	1	22	29S	27E
Kettleman North	Union Oil Co.	King	8	29	21S	17E
Santa Barbara Co.	O. C. Field Gasoline Corp.	Santa Rita	1	11	7N	33W
Greeley	Standard Oil Co.	K. C. 12	4	16	29S	26E
	Standard Oil Co.	K. C. 11	12	20	29S	26E
	Standard Oil Co.	Fleishauer Comm.	3-2	20	29S	26E
Round Mountain	Harry Long	Willis	2	2	28S	28E
Fresno Co.	The Superior Oil Co.	C. U. P.	1	20	16S	13E

Summary	Week Ending April 2	Previous Week	To Date This Year	To Date Last Year
Total New Wells	18	16	303	355
Total Deepened or Redrilled	20	17	222	172
Total Abandoned	8	8	118	128

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MAPS
Large map of Los Angeles Basin oil fields and map showing all California oil fields. Price $15.00 each on paper and $20 each on cloth. Individual state oil and gas maps of Mid-Continent and Rocky Mountain regions Maps show geological cross sections at base. These maps indicate wells drilling, wells producing and abandoned, with depths.
All maps revised up to date of purchase.
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SCOUT REPORTS

NEW MEXICO LEASEHOLDERS: For reliable information on New Mexico developments take my weekly scout report. W. S. Patterson, Santa Fe, N. M.

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WILDCAT MAP

New colored map of entire San Joaquin Valley, $7.50. Shows all oil and gas fields and prospect wells, with status on March 10, 1938. Earl M. Price & Co., Bakersfield, Calif. 5-20-d

The Boland bill (H. R. 3134), which imposes a tax of 1 cent per gallon or 42 cents per barrel on fuel oil has not been recommended out by the House Ways and Means Committee.

Opposition to New Jersey A. B. 185, which creates a state board to fix the retail price of gasoline, is announced by the New Jersey Highway Users Conference.

Oil Men's Calendar

April

4-6—Cincinnati, Ohio, A.G.A. Distribution Conference, Netherland Plaza.

13-15—Houston, Tex., Petroleum Industry Electrical Association, Rice Hotel.

17-21—Dallas, Tex., American Chemical Society.

19—Los Angeles, Spring meeting, Pacific Coast, district, A.P.I. Division of Production, Biltmore Hotel.

20-22—Buffalo, N. Y., American Institute Mining and Metallurgical Engineers, Open Hearth Conference.

25-27—Hot Springs, Ark., Western Petroleum Refiners Association annual meeting.

28-29—Pittsburgh, Pa. Spring meeting, Eastern District, A.P.I. Division of Production, William Penn Hotel.

May

6-12—New Orleans, La. American Gas Association. Natural Gas Department.

11-13—Tulsa. Natural Gasoline Association, Hotel Tulsa.

12-14—Tulsa. National Oil Scouts Association of America.

14-21—Tulsa. International Petroleum Exposition.

23-25—A. P. I., Mid - Year Meeting, Wichita, Kansas.

June

6—Houston, Tex. Oil Workers International Union.

20-24—St. Louis, Mo. American Society of Mechanical Engineers.

September

14-16—Santa Barbara, Calif., annual meeting Pacific Coast Gas Association, Biltmore Hotel.

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